# MICROSOFT° FILE

Organizing your business on the Apple® Macintosh™

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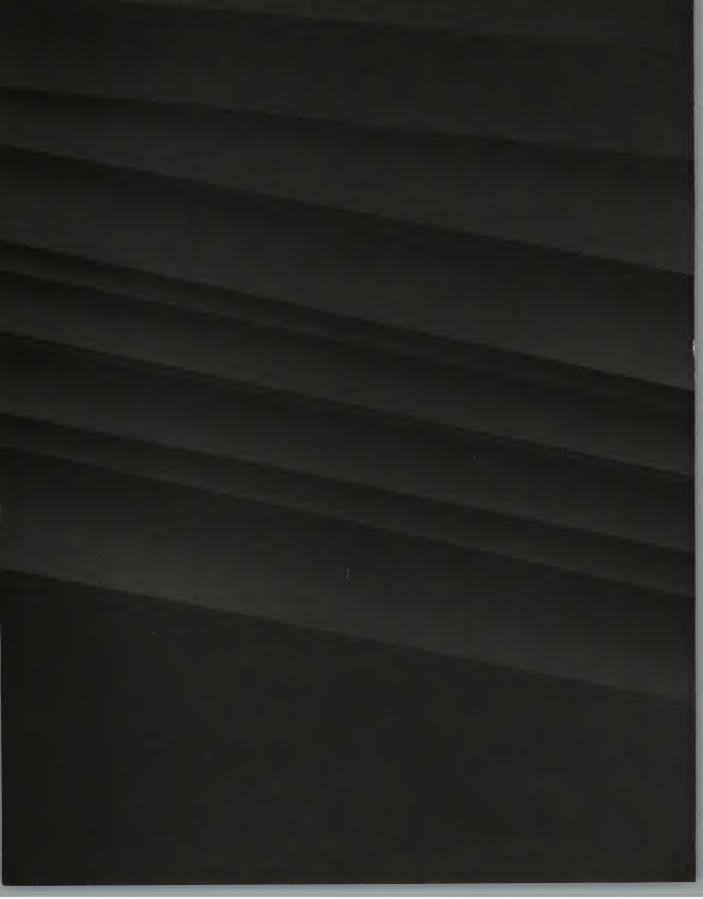
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MICROSOFT. PRESS







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Organizing your business on the Apple® Macintosh™

MICROSOFT.
P R E S S

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Thanks to Jim Tomlin and Carl Nelson for their good examples, energy, and enthusiasm.

Finally, thanks to my family for understanding that my single-mindedness while working on this book was only temporary.



### Introduction

When Microsoft Press approached me about writing a book on File for the Macintosh, I saw it as an opportunity both to write a book and to get my small business organized. I knew about database programs. I had used several in working with clients of my consulting business. But I had never taken the time to organize my own business with a program like Microsoft File. I knew exactly which tasks I needed to organize—personnel, payroll, inventory, and jobtracking. I just didn't know how to start. Offered the opportunity to use a state-of-the-art computer and software (the Macintosh and Microsoft File), I couldn't resist the challenge.

I started with the premise that busy people need someone else to figure out how to accomplish data-management tasks and then to write clear, concise instructions that an intelligent person can follow with a minimum investment of time. And that's what I set out to do. I chose examples based on real-life companies—businesses like the ones you and I are part of. Then I figured

out how to accomplish tasks in the best way possible using File.

Using this book takes the guesswork out of organizing your business tasks with File. You don't have to first figure out what you want, then learn File, then start your task (only to find out, after investing a lot of time, that you can't do exactly what you wanted to do). Instead, you can learn by doing. After you work your way through one chapter (for example, the chapter on inventory), you'll have learned enough about File to be able to customize the inventory example for your own specific needs.

So, if you've been too busy just running your business or doing your job to take the time to put File and the Macintosh to work, this book is for you. It takes standard business tasks (payroll, personnel, inventory and ordering, managing construction, and tracking sales), and shows you exactly how to set up these

tasks on File and the Macintosh.

Aside from the first two chapters, which serve as an introduction to File, you can go directly to the section that covers a task you want to accomplish—there is no prescribed order. If you're interested in inventory and ordering, for example, go to Section Three. If making accurate construction bids is a high priority, go directly to Section Four. However, even though there is no prescribed order, later chapters, particularly those in Section Five, are more complex than earlier chapters.

Each chapter in Sections Two through Five uses a business as a model to demonstrate how to accomplish a specific task with File and the Mac. Each of these chapters gives step-by-step instructions for solving this problem. Your own situation will vary from the examples presented in the book. As you try out the examples in each chapter, you may want to substitute information from your own

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business for the examples in the text. Or, you can first use the examples in the text so that you fully understand the situation and how File works before you enter your own information. This book provides the information you'll need to customize these models for your own specific needs.

The examples and instructions in this book are tailored for a 512K Macintosh computer with an external disk drive. Although you can use File on a 128K Mac without an external drive, working with a large database is very difficult on such a system. Many of the examples include instructions for printing out information stored in File, using the Apple ImageWriter. A printer also is a necessary part of an effective database system. And, if you want to follow the example in Chapter 9, you'll also need a modem.

#### **How This Book Is Organized**

Section One (Chapters 1 and 2) introduces you to Microsoft File. You need know only the basic Macintosh actions—how to choose commands from menus, click, double-click, and drag with the mouse. Chapters 1 and 2 explain how File is structured and how it works. You'll also find some useful strategies for working with File. If you feel you know File well, you can skip Chapters 1 and 2.

Section Two (Chapters 3 and 4) shows you how to put personnel and payroll records on File and the Mac. The scenario is a small deli that has grown past the "mom-and-pop" stage. It now has 30 employees and two locations and is ready to automate. Both personnel and payroll records share the same employee database, so you'll need to work through Chapter 3 before starting Chapter 4.

Section Three (Chapters 5 and 6) covers inventory and ordering. The example used in Section Three is a bicycle shop that puts all of its inventory (bicycles, parts, and accessories) on File and the Mac and then uses this information to order new supplies when the inventory level for any item reaches a predetermined minimum.

Section Four (Chapters 7 and 8) details a construction company that uses File and the Mac to make accurate bids and then track actual costs. By comparing the actual costs of a project to the bid at any stage of the construction, the construction company can control costs more effectively.

Section Five (Chapters 9 and 10) describes some advanced uses for File involving the transfer of information between File and other programs and computers. Chapter 9 shows how the sales division of a mid-sized company uses File and information from the company mainframe computer to track sales. Finally, Chapter 10 shows you how to combine information from File with information from other programs, specifically Microsoft Word, Microsoft Multiplan, and Microsoft Chart.

Appendix A shows you how to use File text files with a BASIC program to perform tasks that File alone cannot do.

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Finally, before you get started with File and the Mac, I'd like to pass along a bit of advice. The best way to begin setting up File for your business is one task at a time. Don't plan to spend one night or one week and put everything on the computer. Start with your most pressing task. Follow the model for that task described in this book and set it up. Then work with it for several weeks or a month and customize it so it really works for your business. Then start your second task. This way, one task at a time, File will make your life easier.

Microsoft File is a data-management program for the Apple Macintosh computer. Data management, sometimes referred to as database management, is computer jargon applied to a program that lets you collect, store, organize, maintain, manipulate, and automatically retrieve information—virtually any kind of information.

The kind of information people store in data-management programs is usually text and numbers—names, addresses, ordering information, billing rates, hours worked, and part numbers. With Microsoft File, you can also store formulas for computing the numbers you have stored, and you can store images and pictures created in a graphics program such as MacPaint or Microsoft Chart, allowing you, for instance, to add pictures of employees to a personnel file, or pictures of parts to an inventory file.

Automatic retrieval means that File allows you to easily get at the information you've stored. You can get information that matches only a certain criterion, rearrange the information in almost any order, and hide any information you don't want to see. Automatic retrieval also includes the ability to produce reports using all or part of the

stored information.

Data-management programs do not do anything difficult or magical; they don't do anything you couldn't do by hand. But it's the volume of information that makes a computer and a data-management program necessary. It's easy to use a telephone directory to look up a phone number of a person whose name you know. But consider using a telephone directory to find a name when all you have is the phone number—a task that a computer and data-management program could do quickly and effortlessly. The advantages of electronic data management are that you can store more information in less space, retrieve it more quickly, have calculations performed automatically, and print useful, varied reports.

But before you jump in and decide to computerize everything from client lists to recipes, remember: There is a cost. Consider that although a data-management system can do all these things, it does not arrive ready to do them. You must first familiarize yourself with a particular data-management program, such as Microsoft File. Then you need to set up your particular application—mailing list, client invoices, inventory control, or whatever—on the computer, and this will take some time. Before you computerize, it's important to establish that the use you make of the computer and data-management program will justify the time it takes to set it up to do the work you want it to do.

This section is intended to familiarize you with File. If you've already used File and understand its structure, its commands, and shortcuts for using it, you may wish to skip this section and continue with Section 2. If you're a new File user or want to know

more about how File works, read on.

# SECTION ONE

Creating and Using a Datafile: The Basics of File



## **Creating**a Datafile



A computer filing system, such as Microsoft File, is similar to a paper filing system. In a paper system, there are manila folders with papers in each folder and information on each piece of paper. For example, in a paper filing system, you might have separate folders for information about employees, suppliers, and customers. With File, you create datafiles that serve as your folders. In File, you might organize information about employees, suppliers, and customers into datafiles along similar lines.

The records in a datafile are like the individual papers you keep in each folder. In your employee information folder, you'd most likely keep a completed employee information form for each employee. In File, each employee's information would be a record in the datafile.

Each record is divided into fields, which correspond to items of information on a paper. For example, an employee record might contain fields for name, address, phone number, and emergency contact.

#### Form and Data

One important difference between File and a paper filing system is that File keeps data and the form in which it is displayed separate. For each of your datafiles, File stores two things: the actual data (like employee name, address, and phone number), and the form in which this data is displayed (both on the screen and on paper when you print it). This form is like a paper form: It determines how the information will look. But, unlike a paper form, you can modify the File form, changing the amount of information displayed and the way the information is displayed. What this means is that you can enter information once in one large datafile and use it many different ways; you don't need to enter duplicate information or make another datafile because you want a

slightly different format. If you have both personnel and payroll information in one datafile, you can create one form that displays all the information, another form that hides the payroll information and displays only the personnel information, and a third that displays only names and addresses for tasks such as printing mailing labels. If you like the bottom-line figures instantly visible in the left column, but your partner prefers seeing the other data before the bottom-line figures, you can each look at the data in your own way by using separate forms, and the only cost will be the time involved to create one additional form.

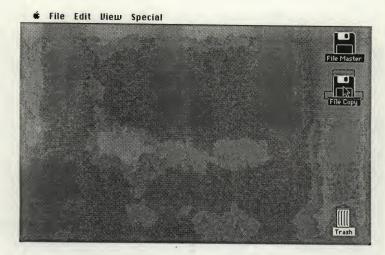
In fact, File automatically stores two forms with each datafile, so you can look at your data two ways. A click of the mouse button enables you to switch back and forth between the two displays. And since the forms and data are separate, if you need more than the two forms or views File stores with each datafile, you can create additional forms and save them on disk under their own names. You'll probably find that 80 percent of the time you'll use only the two forms that File automatically saves with each datafile: one form that displays all the data (you'll use this view to enter data) and another form that is your preferred view of the data (showing only the fields you usually need in the order you want them). For example, in Chapters 3 and 4, you'll learn how to put personnel and payroll information together in one large datafile, and use the complete personnel-payroll form to view all the data when changing or updating employee information. But you'll use the payroll form—the one that has only payroll information—most of the time for your routine monthly payroll tasks.

An additional benefit of the form and the data being separate is that you can print just the blank form without any data displayed in it. This feature gives you the capability of using File and the Mac to design blank paper forms. This way you can create exactly the form you want, personalized for your business without the additional cost of commercial printing.

#### Making a Backup Copy of File

If you haven't already done so, before you start working with File, it's a good idea to make a backup copy of your File Master disk. Using a copy of the master disk doesn't mean you can store the master in a locked vault. File's copyprotection requires you to insert the master disk each time you start your Mac and File. But if you use a backup copy of the disk for your day-to-day operations, you'll be much less likely to damage the master disk, and if anything happens to your first copy, you can just make another copy.

To make a copy of File, put the File Master disk in the internal drive and a new disk in the external drive. Then initialize the new disk and name it File Copy (or some other descriptive name). Now, move the mouse pointer to the File Master disk icon, drag it on top of the File Copy icon, and release the mouse button.



The Mac will copy the contents of the master onto the copy.

#### File: A Guided Tour

Now let's take a look at File and the steps you take to create a datafile. These steps include:

- 1. Start File.
- 2. Open a new datafile.
- 3. Name the fields and choose an information type for each field.
- 4. Format the fields.
- 5. Enter the data.

#### **Starting File**

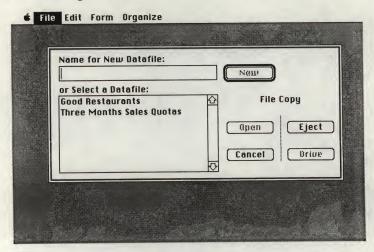
You start File the same way you start any other Mac application: Doubleclick on the Microsoft File icon.



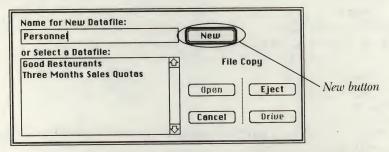
Microsoft File

After File asks you to insert the File Master disk, you'll see a copyright notice.

You'll then see a dialog box that looks like this:

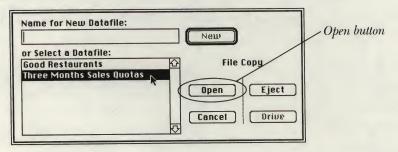


At this point, you tell File which datafile you'll be using. If you're starting a new datafile, type a name for it in the Name for New Datafile typing field. As soon as you start typing, the New button changes from dimmed to highlighted, indicating that you can use this button.



When you finish typing the name of your new datafile, click the New button.

If you're opening an existing datafile, select its name from the list box. As soon as you click on a name to select it, the Open button changes from dimmed to highlighted, which tells you that you can use it.



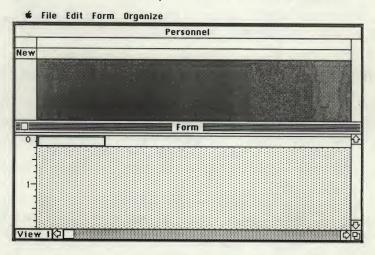
Click the Open button to open the datafile you've selected.

You can also open an existing datafile by simply double-clicking on its name in the list box.

You may find it quicker after typing the name of a new datafile to simply press the Return key or the Enter key rather than take your hands away from the keyboard and grab the mouse to click the New button.

If you want to save a new datafile on a data disk, or open an existing datafile on a data disk, insert the data disk in the external drive. The Drive button will then change from dimmed to highlighted, and you can then click it to change to the other drive. The disk name displayed in the dialog box is disk on which File will save a new datafile.

After you start a new datafile, your screen will look like this:



The top window is called the datafile window. It's the place where you'll enter information. The bottom window is the form window, where you'll design how the information you enter in the datafile window will look. The form window is like a blank form. After you create the form, each record you enter in the datafile window will be like a completed form. The form window is the active window when you start a new datafile.

#### **Creating a Form**

Your first task in making datafiles is to design a form. You design a form by naming the fields, specifying the type of information they will hold, and determining their size and placement on the screen.

#### List Helper

File has two ways to design forms: with the List Helper command from the Form menu or without the List Helper command. With List Helper, all you need

to do is name the fields and specify what type of information they will hold, and File takes care of arranging them in columns like this:

**★** File Edit Form Organize

			ersonnel		
	Last Name	First Name	Street Address	City	Stat
1	Greenbrier	Andrew	920 Chippewa D	Bothell	WA
2	Hazelton	Suzanne	8017 - 52nd S.V	Seattle	WA
3	Justice	Francis	6063 Gatehouse	Mukilteo	WA
4	Salieri	Sharon	717 Campbell	Mukilteo	WA
5	Bruce	Jack	5102 Pecks Dri	Seattle	WA
6	Genorio	Victor	603 - 1st Ave.	Seattle	WA
7	Genorio	Angela	603 - 1st Ave.	Seattle	WA
8	McFadden	Sheila	611 Oak Knolls	Seattle	WA
9	Brooks	Karen	132 N. London	Seattle	WA
10	Zook	Dori	1201 Mukilteo E	Mukilteo	WA
11	Andrews	Kaaren	1212 - 5th St.	Mukilteo	WA
12	Allendorfer	Barbara	404 Ocean	Seattle	WA
13	Beamon	Jason	419 Queen Anne	Seattle	WA
14	Larkin	Mike	6291 - 8th Ave	Mukilteo	WA
15	David	Kate	2012 - 23rd Av	Mukilteo	WA
16	McDonald	Heather	212 Cedar	Mukilteo	WA
17	Lei	Tiffanu	16022 - 12th.Dr	Mukilten	WA
20/	20 🗘 🗌				I V

Because File has done the design work on this form for you, this is the quickest and easiest form to use. It's also good for viewing many records at once; with a List Helper form you can see information from 17 records on the screen at one time.

The List Helper form is File's default—that is, it's the form you automati-

cally get when you open File.

The List Helper form enables you to change the width of individual fields. You might, for example, want to make an address field wider to display the entire address.

**#** File Edit Form Organize

		Pe	ersonnel		
	Last Name	First Name	Street Address +	<ul><li>City</li></ul>	_ (2
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell	W
2	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle	₩
3	Justice	Francis	6063 Gatehouse	Mukilteo	₩
4	Salieri	Sharon	717 Campbell	Mukilteo	W
5	Bruce	Jack	5102 Pecks Drive	Seattle	W
6	Genorio	Victor	603 - 1st Ave.	Seattle	W
7	Genorio	Angela	603 - 1st Ave.	Seattle	W
8	McFadden	Sheila	611 Oak Knolls	Seattle	W
9	Brooks	Karen	132 N. London	Seattle	W
10	Zook	Dori	1201 Mukilteo Blvd	Mukilteo	W
11	Andrews	Kaaren	1212 - 5th St.	Mukilteo	W
12	Allendorfer	Barbara	404 Ocean	Seattle	W
13	Beamon	Jason	419 Queen Anne Ave.	Seattle	W
14	Larkin	Mike	6291 - 8th Ave.	Mukilteo	W
15		Kate	2012 - 23rd Ave.	Mukilteo	W
16	McDonald	Heather	212 Cedar	Mukilteo	W
	lei essessesses	Tiffanu	6022 - 12th Dr	Mukilten	X
20/	20[7]				17/

You can also make all the fields longer (but not individual fields—when you lengthen one field of a List Helper form, you lengthen the entire record).

	File Edit Fo		ersonnel		
	Last Name	First Name	Street Address	City	
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell	W
2	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle	W
3	Justice	Francis	6063 Gatehouse	Mukilteo	W
4	Salieri	Sharon	717 Campbell	Mukilteo	w
5	Bruce	Jack	5102 Pecks Drive	Seattle	W
6	Genorio	Victor	603 - 1st Ave.	Seattle	W
7	Genorio	Angela	603 - 1st Ave.	Seattle	W
8	McFadden	Sheila	611 Oak Knolls	Seattle	W
9	Brooks	Karen	132 N. London	Seattle	W
10	Zook	Dori	1201 Mukilteo Blvd	Mukilteo	WQ

If you delete or hide a field in a List Helper form, File moves the other fields to the left to close up the space left by the missing field. Also, if you rearrange the fields, the gap where you took out the field will close up, and all of the fields to the right of where you inserted the field will be pushed to the left. All of the fields in a List Helper form are contiguous.

List Helper is on if there is a check mark on the Form menu and it's off if there is no check mark beside it.

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If you want a different type of form, you can remove the check by choosing List Helper from the Form menu. With List Helper off you can create a form that more closely resembles a paper form.

Checking List Helper and removing the check mark is a toggle action, similar to turning a light switch on and off. When you first pull down the Form menu, you'll see that List Helper has a check mark beside it.

To design a non-List Helper form, choose the List Helper command.



Then, the next time you pull down the Form menu, you'll see that the check mark is gone.



If you then decide to go back to a List Helper form, choose the List Helper command again. After you do, the next time you pull down the Form menu, you'll see that List Helper has the check mark beside it once again.

When you're making a form without List Helper, you name and assign information types to fields the same way you do when you use List Helper. But without List Helper, you can arrange the fields non-contiguously by dragging them with the mouse. Fields in a non-List Helper form are like boxes that you can move anywhere and size individually.

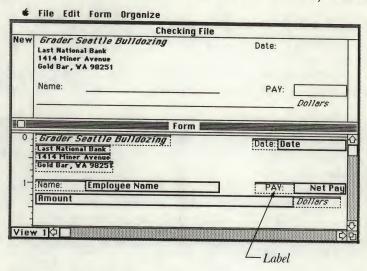
Each field is independent of every other field. You can have huge fields and tiny fields in the same form. In a non-List Helper form you can leave large spaces between fields, line them up next to each other, or overlap them on top of each other. If you move or delete a field in a non-List Helper form, the other fields do not move in and claim its space as they do in a List Helper form.

When List Helper is checked, File automatically labels fields at the top of each column.

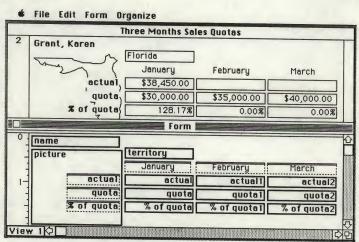
Last Name	First Name	Street Address	City	State	2
1 Greenbrier	Andrew	920 Chippewa Dr.	Bothell	WA	]
2 Hazelton	Suzanne	8017 - 52nd S.W.	Seattle	WA	
3 Justice	Francis	6063 Gatehouse	Mukilteo	WA	N
4 Salieri	Sharon	717 Campbell	Mukilteo	WA	N
5 Bruce	Jack	5102 Pecks Drive	Seattle	WA	
6 Genorio	Victor	603 - 1st Ave.	Seattle	WA	\
7 Genorio	Angela	603 - 1st Ave.	Seattle	WA	
8 McFadden	Sheila	611 Oak Knolls	Seattle	WA	
9 Brooks	Karen	132 N. London	Seattle	WA	
10 Zook	Dori	1201 Mukilteo Blvd	Mukilteo	WA	
11 Andrews	Kaaren	1212 - 5th St.	Mukilteo	WA	
12 Allendorfer	Barbara	404 Ocean	Seattle	WA	
13 Beamon	Jason	419 Queen Anne Ave.	Seattle	WA	
14 Larkin	Mike	6291 - 8th Ave.	Mukilteo	WA	
15 David	Kate	2012 - 23rd Ave.	Mukilteo	WA	
16 McDonald	Heather	212 Cedar	Mukilteo	WA	
17   ej	Tiffanu	6022 - 12th Dr	Mukilten	IWA I	¥

Without List Helper, you can add individual labels to your form. Labels are a special type of text or picture field that are optional; you can create and position a label anywhere on the form. Labels can be used to identify or give

information about a field and can be the same as the field name. For example, you can create a label that says NAME: and position it next to a field called Name where you enter clients' names. Or you can create a label that is different from the field name. For instance, you can create and position the label PAY next to a field called Net Pay to make a form look like a check from your bank.



You can make a label containing a picture or chart. You can overlap a label on top of a picture. Notice, for example, on the following screen taken from the Three Months Sales Quotas datafile on the File Master disk, that the state is a picture field and the actual, quota, and % of quota labels overlap on top of the state picture field.



You can change the size of a field, have it display information with or without a border around it, or change the font of the characters that will be displayed in it. So, you can give an important piece of data a large box and use large type, then make a smaller subordinate label field to identify it and use small type.

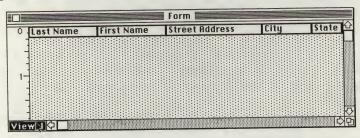
#### **Vertical Form**

Another form that's included with File is the form you get when you choose Vertical Form from the Form menu.

In this form, File has arranged all the fields from the top of the form window to the bottom, created a label for each field, and placed that label to the left of each field.

The vertical form is useful when your form has a lot of fields and you can't see all the information in one record on the screen at once. The vertical form gives you a snapshot of all the fields in one record. Compare the List Helper and vertical forms shown in Figure 1-1.

In addition to the Vertical Form, File automatically stores two forms with each datafile, called View 1 and View 2. You can switch between these two views by clicking the view box in the lower left corner of the form window.



To switch views, you can also double-click on any record number in the datafile window or hold down the Command key and press the T key.

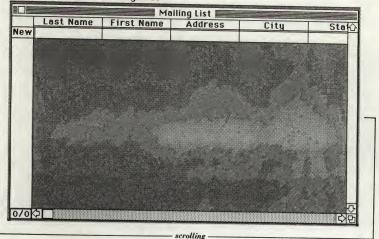
So, you could use this feature to have one view as a non-List Helper form that displays your data in a way that is similar to the paper form you are used to, then you could save the other view as a List Helper form so you can see a lot of records on the screen at once. You could then use this second form when you have to update a lot of records as quickly as possible.

#### Creating a heading area

Another feature you can add to your non-List Helper form is a heading area at the top. A heading area can contain either text or a picture and text. You can use the heading area, for instance, to put your company logo at the top of a non-List Helper form. File displays the heading only once, at the top of the records. If you print the records, the heading will appear at the top of each page.

Figure 1-1. A List Helper form (top and center) and a vertical form (bottom)

 **★ File Edit Form Organize**

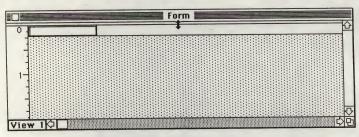


	State	Zip	Birthdate	Anniversary	
New					Madie en annua
					17.4
					344
				<b>深度形</b> 。(F	
					4-
	1,000				- 4
				25 - 14 a.c.	1
			Park No.		
			#	P Alla	
				auto comité	
				198.0	

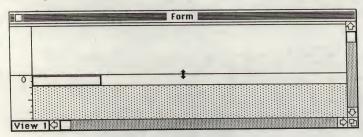
**★** File Edit Form Organize

New	Last Name:	Mailing List	
	First Name: Address: City: State: Zip: Birthdate: Anniversary:		
70k	<u>م</u>		7

To create a heading area, first position the mouse pointer on the line marking the top of the form (just below the title bar of the form window).



Then drag this line down. When you release the mouse button, the heading area appears at the top of the form.



In a non-List Helper form, if you create a heading area before creating any fields, the heading area will be blank. But if you create a heading area after creating fields, File will position a column heading above each field and give the column heading the same name as the field.

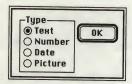
So, if you don't want to use field names for column headings, it's a good idea to create the heading area before naming any fields. That way, you won't have to delete the column heading names File automatically assigns when fields already exist.

In a List Helper form, these field headings are automatically displayed whether you pull down the top of the form before entering any field names or not, and the only option you have is changing the text of the field heading.

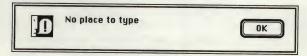
Employee's Last Name	First Name	Street Address	City	State
Last Name	First Name	Street Address	City	State
7				
-				

#### Naming Fields and Choosing Their Information Types

As part of setting up your form, you name each field (for example, Name or Date Hired or Phone Number). To name a field, simply type the name. After you type the name, press Return. File then displays a dialog box asking you to specify the type of information that will be entered in that field: Text, Number, Date, or Picture.



(If you hear a beep and see the following message when you start to type, you need to move the mouse pointer to the next available field and click the mouse button to get an insertion point.)



To specify the information type, you simply click one of the four buttons in the Type list box: Text, Number, Date, or Picture. Then, you click OK to carry out the command.

There are keyboard shortcuts for choosing an information type. Because entering field names requires the keyboard, you may find it quicker to enter information types from the keyboard rather than with the mouse. Text is File's default information type (as you can tell by the filled Text button in the Type list box). To choose text as the information type for a field, simply press Return when the dialog box appears. To choose Number, Date, or Picture without taking your hands away from the keyboard, simply press the first letter of the information type you want. For example, press P for Picture. You can also carry out the command from the keyboard. To do this, simply press Return instead of clicking OK.

#### Some guidelines for choosing an information type

The information type you choose for a field determines the kind of information that will be entered in it. For example, if you want to record the number of jars of mustard in stock at your deli in one field and the number of jars of pickles in another field, you want only numbers entered in those two fields. If you define those fields as number fields, File will check the information you enter into each of those fields and give you an error message if you try to enter non-numeric information.

A field's information type is important when you sort your records (you'll learn more about sorting in Chapter 2). If you wanted to sort an employee list in chronological order by the date the employee was hired, you would select Date as the information type for the field containing the hiring date. If you selected Text, File would sort the dates in alphabetical order, which in most cases would not be useful.

Deciding whether a field is a text field, a date field, or a picture field is easy; it is determined by the type of information you are storing. Deciding

between Text and Number information types can be tricky.

A text field is one that contains letters and spaces. But occasionally it will contain a number. An address like 419 Queen Anne Avenue is considered text

because it contains letters and spaces as well as a number.

A few fields that contain numbers should use the text rather than the number information type. If a number needs hyphens (like a social security or telephone number), you should define it as text. If you try to enter a number containing a hyphen in a number field, you'll get an error message. You should also define a zip code as text. File strips leading zeroes when it displays numbers, so if you have any Maine or Connecticut zips in number fields, they'll be missing their first digit. However, if you define zips as text, all will be well; you'll see the leading zeroes, and you'll still be able to sort them properly.

The Number information type offers an additional choice that the Text, Date, and Picture information types don't offer. Text, date, and picture fields can display only what you enter in the datafile window. But a number field can display either a number that you enter in the datafile window or the result of a calculation. You display the result of a calculation by formatting a number field as a computed number field. We'll look at computed number fields more closely when we explore File's field formatting options in the next section of this chapter; you specify that a number field will be a computed number field at the same time that you select formatting options.

It's important to make correct decisions about the information types of the fields. Once you've entered data in the datafile window or quit File, you cannot go back and change the information type (for example, from Text to Number). If you do discover you've made an error, all is not lost. There is a way around this limitation. Delete the field with the wrong information type in the form window, then add a new field and give it the correct information type. It's not

a perfect solution, but it works.

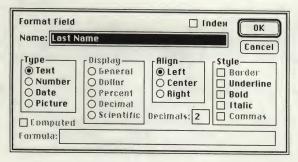
#### **Formatting Fields**

After you've named each field, chosen the appropriate information type for each, and designed your form, you still may have a few more choices to make about how you want the information in each field to look. The format choices

available for each field depend on the information type of the field. In fact, the wording of the Format Field... command on the Form menu when you choose this command depends on the information type of the field you are formatting. For example, if you are formatting a number field, the Format Field... command on the Form menu reads Format Number Field... and the dialog box that's displayed when you choose this command is specifically for number fields. So, let's look at the formatting options by information type.

#### Formatting text fields

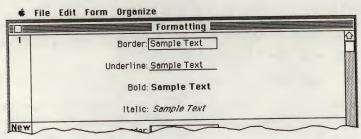
When you select a text field for formatting (by clicking anywhere in it) and choose the Format Text Field... command from the Form menu, the following dialog box appears:



The Align list box allows you to select one of three alignments of the text displayed in a text field: Left, Center, and Right. Left is the default option, as indicated by the filled button beside it. If you want to change the option, click the button beside the option you want. The three Align options will display text like this:

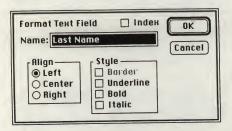
Text Alignment					
	Left Aligned	Center Aligned	Right Aligned		
1	Sample	Sample	Sample		
2	Text	Text	Text		
ew					
			or managements and		
	100 COST 100 COST		ASSESSED IN		
	<b>在</b> 1600 年		1986 (Sept. 1987)		
	AST 1842 (S)		T-0.000 (1995)		
	Management :		100000000000000000000000000000000000000		
	483000000000000000000000000000000000000		100		

The Style list box offers a choice of up to four options you can apply to a text field: Border, Underline, Bold, and Italic. You may choose more than one Style option. The four Style options on a non-List Helper form look like this:



Border is the default option for a non-List Helper form. However, the Border option applies only to non-List Helper forms. When you choose the Format Text Field... command for a List Helper form, the Border button is dimmed, because fields in a List Helper form are always displayed with borders, and you can't change that format.

Notice at this point that you can change the information type by clicking one of the three buttons in the Type box that aren't filled (Number, Date, and Picture). However, if you choose the Format Text Field... command after you begin entering information in that field or after you quit and then restart File, you'll see a slightly different dialog box that doesn't contain the Type and Display boxes.

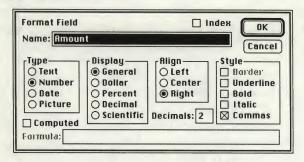


The Type box isn't displayed because you can't change a field's information type after you begin entering data or quit File. In addition, there is no Display box because the Display options don't apply to text fields.

When the options in the Format Field dialog box are to your satisfaction, click the OK button.

#### Formatting number fields

When you click on a number field in the form window to select it and then choose the Format Number Field... command from the Form menu, the following dialog box appears:



As you can see, the formatting choices are more numerous for number fields than for text fields. In addition to the Type, Align, and Style boxes available for text fields, the Display list box, Decimals box, and Computed box are available for number fields. Also notice that the default option in the Align list box is Right (File automatically right aligns numbers and left aligns text) and that the Commas option in the Style list box is available and has an X in the box beside it, signifying it's a default option (File automatically displays numbers of a thousand or greater with commas). As mentioned earlier in this chapter, the Border option is available only on non-List Helper forms.

The options in the Display list box allow you to change the way the numbers you enter are displayed. This table shows how the same number is displayed by using each Display option:

		Numeric Displays	
1	General Display:	16,700	<u></u>
	Dollar Display:	\$16,700.00	
	Percent Display:	1,670,000.00%	
	Decimal Display:	16,700.00	
	Scientific Display:	1.67E+04	

The first four Display options are self-explanatory, but the Scientific option might not be familiar to you.

Scientific, which stands for scientific notation, is a way to express exponential numbers conveniently. In scientific notation, a number is expressed as the power of a product of 10 (in this example, 10<sup>4</sup>), multiplied by a number from 1 to 9 (in this case, 1.67). The E stands for exponent, and the plus sign indicates the exponent (4) is a positive exponent.

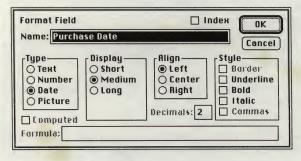
The Decimals box to the right of the Display list box is related to the Display list box. The number of decimals you type in the Decimals box will be the number of decimal places displayed for any of the last four Display options (except General). The default number in the Decimals box is 2.

The Computed box below the Type list box is where you specify that a number field is a computed number field, the special type of number field mentioned earlier in this chapter. When you click to put an X in the Computed box, the Formula typing field below it changes from dimmed to highlighted. If you put the mouse pointer in the typing field and click the mouse button, a blinking insertion point appears in it, indicating that you can type a formula there. Most of the time, you'll probably use the names of other fields in your formulas, but you can also use numbers.

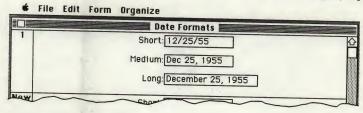
To demonstrate how computed number fields work, let's say each record in your datafile represents an item in your inventory. Let's say you have a number field called Quantity for the number of each item currently in stock, and a number field called Wholesale for the wholesale cost. To calculate the total wholesale value of each item in your inventory, you could create a field named Total Value, format it as a computed number field, enter the formula Wholesale Cost \* Quantity in the Formula typing field, and press Return. (Computers use the asterisk instead of the × symbol to represent multiplication and the slash instead of the ÷ symbol to indicate division.) With this formula, the Total Value field of each record will display the result of multiplying the numbers in the Wholesale Cost and Quantity fields. You can go back and change a formula after you've formatted a number field as computed, but you can't make a number field a computed number field (or vice versa) after you begin entering data in the datafile window.

#### Formatting date fields

When you select a date field and choose the Format Date Field... command, the following dialog box appears:



Notice that the Display list box has different options than the Display list box for text and number fields. Date fields can have one of three Display options:



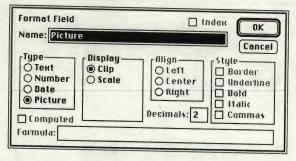
You can enter date information in any format and File will convert it to the format you set. File's default date display is Medium format.

Date fields can be left aligned, centered, or right aligned, like text and number fields. The default is left aligned, just like a text field. Date fields have the same Style choices as text fields.

#### Formatting picture fields

Picture fields contain pictures you create with MacPaint, Microsoft Chart, or another graphics program, and then add to your records by pasting them in from the Macintosh Clipboard. You could use picture fields to visually represent information or just to add interest. Specific instructions for transferring pictures from MacPaint to File are in Chapter 6.

The Format Field dialog box for a picture field looks like this:



Picture fields have two Display options: Clip and Scale. If you choose Clip, File pastes as much of the picture as will fit into the field you've created starting at the upper left corner of the picture. If you choose Scale, File will size the picture to fit the field. Figure 1-2 shows the same picture pasted into a picture field with Clip and with Scale.

The only Style choice when you are using a non-List Helper form is Border, which allows you to display your picture with or without a box around it. Figure 1-3 shows these two options.

File's defaults are Clip for Display and Border for Style.

Figure 1-2. A picture pasted into a picture field with Clip (top) and Scale (bottom)

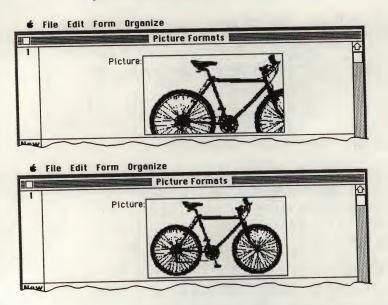
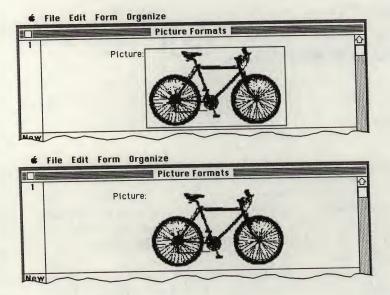


Figure 1-3. A picture field with (top) and without (bottom) a border



# **Entering Data**

After naming each field, choosing the information type for each field, and designing the form, you're ready to enter information for each record by typing it in the datafile window. This is the easiest part—easier than typing information onto a paper form. You type information into a field, such as an employee name. When you've finished typing the information in one field, you simply press Return or Tab, and File automatically moves you to the next field. Holding down the Shift key and pressing Return or Tab moves you to the previous field. When you finish entering information for the last field of one record, press Return or Tab, and File moves you to the first field of the next record.

Entering information in File is easier than using paper and a typewriter because File lets you edit what you've typed without erasing. If you type an incorrect character, the Backspace key will clear the character to the left of the insertion point (the last character you typed). If you spot an error in a previous field, simply move the mouse pointer to that field, click for an insertion point, use the Backspace key to delete any unwanted characters and then just type in the correct ones.

File has three key sequences you should know about when entering information. They can save you a lot of time.

### • Command-apostrophe

Holding down the Command key and pressing the apostrophe key (') copies the contents of a field in the previous record to the same field in the current record.

# • Command-hyphen

Holding down Command and pressing the hyphen key (-) copies the current date from the Macintosh internal calendar into that field. You can change the calendar by choosing Control Panel from the Apple menu.

### Command-semicolon

Holding down Command and pressing the semicolon key (;) copies the current time from the Macintosh clock into that field. You can change the time by choosing Control Panel.

Command-apostrophe can be especially useful if you have one field (for example, the contents of a field named City in an employee datafile) that will be the same for each employee. You just type the city once in the first record; then each time you come to the City field, simply hold down the Command key and

press apostrophe. (Note: The Microsoft File manual refers to this key sequence as Command-quotation. But, since the quotation mark is the shifted position of this key and you don't need to use the Shift key in this key sequence, this book uses the term Command-apostrophe.)

# **Saving Your Data**

With File, you don't need to worry about periodically saving your data, as you do with most other programs. File automatically saves your data on disk for you. Once you've named a new datafile, or opened an existing one, File periodically saves any records you have entered. That's why you'll hear the disk drive whirring from time to time, even though you haven't given any commands to write to the disk. When you quit File, or choose the New Datafile... or Open Datafile... command from the File menu, File automatically saves all records before quitting or presenting you with a dialog box that allows you to create or open another datafile.

When you quit File or choose the New Datafile... or Open Datafile... command, the only save options File presents are for changes or additions you have made to forms and reports attached to that datafile. File asks if you want to save the changed form, report, or both form and report with that datafile.

# Using a Datafile



Now that you know how File is structured, how to make a form for your datafile, and how to enter information, let's continue our File tour by looking at how to work with File. In this chapter, we'll look at:

- Moving around the datafile so you can see all of your information
- · Searching to find the information you need
- Sorting records into a specified order
- Printing records
- Printing reports
- Maintaining datafiles (for example, how to add and delete fields, records, and groups of records)

The chapter ends with some hints and strategies for working with File.

# **Moving Around the Datafile**

You can scroll through information in your datafile window (or any other window) just as you would in any Mac application by using the scroll bars on the right and the bottom of the screen. You can use the mouse to drag the scroll box in the direction you wish to scroll, or you can click anywhere in the scroll bar on either side of the scroll box to scroll the screen approximately one screen width at a time. You can also click in the arrows at the ends of the scroll bars. Clicking these arrows moves you approximately one row or column at a time in the direction of the arrow you're clicking on.

*	File Edit Fo	rm Organize				
		P	ersonnel			Scroll
	Last Name	First Name	Street Address	City	State &	arrou
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell	WA	0 11
2	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle	WA	Scroll
3	Justice	Francis	6063 Gatehouse	Mukilteo	WA	box
4	Salieri	Sharon	717 Campbell	Mukilteo	WA	
5	Bruce	Jack	5102 Pecks Drive	Seattle	WA	
6	Genorio	Victor	603 - 1st Ave.	Seattle	WA	
7	Genorio	Angela	603 - 1st Ave.	Seattle	WA	
8	McFadden	Sheila	611 Oak Knolls	Seattle	WA .	
9	Brooks	Karen	132 N. London	Seattle	WA	Scrol
	Zook	Dori	1201 Mukilteo Blvd	Mukilteo	WA	bar
11	Andrews	Kaaren	1212 - 5th St.	Mukilteo	WA	our
12	Allendorfer	Barbara	404 Ocean	Seattle	WA	
13	Beamon	Jason	419 Queen Anne Ave.	Seattle	WA	
	Larkin	Mike	6291 - 8th Ave.	Mukilteo	WA	
15	David	Kate	2012 - 23rd Ave.	Mukilteo	WA	
	McDonald	Heather	212 Cedar	Mukilteo	WA	
17	Lei	Tiffanu	16022 - 12th Dr	Mukilten	WA C	4
20/	20					Scrol
	1-5	Scroll box	Scroll ba	r		arron
	7	Scroll arrow				

File has several keyboard commands you can use instead of using the mouse for moving the insertion point to fields in the next or previous record. Keyboard commands are particularly useful when you're entering or changing information, because your hands don't have to leave the keyboard.

### • Enter

The Enter key advances you to the first field in the next record.

### • Shift-Enter

Holding down the Shift key and pressing Enter advances you to the first field in the previous record.

At times you may find it useful to move through the datafile one screenful at a time. File has keyboard commands to do this, too.

### Option-Enter

Holding down the Option key and pressing the Enter key shows you the next screenful of records.

# • Shift-Option-Enter

Holding down the Shift and Option keys and pressing Enter scrolls the records one screenful up.

Occasionally you may wish to enter or change information in only one field of your datafile. File has keyboard commands to move the insertion point to the same field in the next and previous records.

### • Command-Enter

Holding down the Command (%) key and pressing Enter advances the selection to the same field in the next record.

### • Command-Shift-Enter

Holding down Command and Shift and pressing Enter advances the selection to the same field in the previous record.

# **Searching for Information**

One of the major advantages of an electronic filing system over a paper filing system is the ability of an electronic system to quickly locate the information you want. You specify what you want to look for in terms of search criteria; the computer and File do the work.

# **Using the Find Command**

To have File find the records you want displayed, you first choose the Find... command from the Organize menu.

		P	ersonnel		
	Last Name	First Name	Street Address	City	State
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell	WA
2	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle	WA
3	Justice	Francis	6063 Gatehouse	Mukilteo	WA
4	Salieri	Cheron	717 Cemphall	Mukilton	WA
5	Bruce		Find Find		WA
6	Genori Fi	ind Clear		ķ.	ΑW
7	Genori Last	Name   First	Name   Street Add	trace	WA
8	McFado	Name First	Name Street Aut	11 633	WΑ
9	Brooks				WΑ
0	Zook			7	¬WA
1	Andrey				ΔWA
12	Allendorrer	barbara	T404 Ucean	Seattle	TWA
13	Beamon	Jason	419 Queen Anne Ave.	Seattle	WA
14	Larkin	Mike	6291 - 8th Ave.	Mukilteo	WA
15	David	Kate	2012 - 23rd Ave.	Mukilteo	WA
16	McDonald	Heather	212 Cedar	Mukilteo	WA
-	Lei	Tiffanu	6022 - 12th Dr	Mukilten	JWA

A new window, called the find window, appears. The find window is where you specify the search criteria.

In the find window, click in the field containing the information you want File to find. An insertion point appears. Type the information for the records you want File to find.

Find Clear				
Street Address	City	State	Zip	Р
	= Mukilted			
	= Muktited			

The instructions that you type to tell File what to find are called the search criteria.

Then click the Find button to start the search. As File is searching the datafile, a status line at the bottom of the screen tells you how the search is progressing.

		P	ersonnel		
	Last Name	First Name	Street Address	City	State
1	Justice	Francis	6063 Gatehouse	Mukilteo	WA
2	Salieri	Sharon	717 Campbell	Mukilteo	WA
3	Zook	Dori	1201 Mukilteo Blvd	Mukilteo	WA
4	Andrews	Kaaren	1212 - 5th St.	Mukilteo	WA
5	Larkin	Mike	6291 - 8th Ave.	Mukilteo	WA
6	David	Kate	2012 - 23rd Ave.	Mukilteo	WA
7	McDonald	Heather	212 Cedar	Mukilteo	WA
1					
_					
_					
Re	cords found:	7 Record	ds processed: 16		Cancel

Note the Cancel button in the status line. You can click this button while File is searching for records to cancel the search. File will display the records it has found up to the point you clicked the Cancel button.

After you click the Find button, File finds all the records with the field or fields that match the criteria you specified in the find window and displays these records in the datafile window. The total number of records displayed can be seen in the box in the lower left corner of the datafile window (for example, if the box contains 30/100, File is displaying only 30 out of 100 total records). Since only the records you wanted to locate are displayed in the datafile window, you can rearrange, print, or generate a report using only the located information. The rest of the records are hidden from view; File will not display them again until you choose the Show All Records command from the Organize menu. If you choose the Find... command again, however, File will search all the records in the datafile, not just the ones displayed.

# **Search Operators**

In the find window, you have many options for specifying the criteria you want File to use when searching for records. For example, if you just type the letter A in a text field in the find window and click the Find button, File will find all records with text in that field beginning with the letter A (File ignores upperand lowercase when searching for records). You can also use a comma to specify more than one criterion in one field. For example, you could type R,L in a text field in the find window and File would locate all records with text in that field beginning with an R or an L. Note that this single-character search specifier only works for text fields.

File can also follow more complex search instructions to locate records. You can use the following symbols, called operators, to further qualify what you want File to find.

• =

When you type an = at the start of the search criterion, File will match exactly what you type.

• <> or ><

The <> and >< symbols tell File to find all records in which the selected field contains anything but what you type.

• >

Preceding your search criterion with > tells File to match anything greater than what you type.

• >=

When you put a >= ahead of the search criterion, File will match anything greater than or equal to what you type.

• <

The < symbol tells File to match anything less than what you type.

• <=

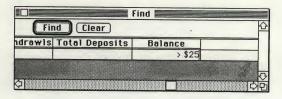
With the <= symbol preceding a search criterion, File will match anything less than or equal to what you type.

•

Putting a ... symbol in a search criterion tells File to match anything within the range you specify.

Note that you cannot use commas to specify more than one search criterion with any of these operators except =.

As an example of how you might use a search operator to find all accounts with a balance greater than \$25, you would click in the Balance field in the find window and type > \$25.



### Wildcards

File has two so-called wildcard search characters: the asterisk (\*) and the question mark (?). You can use both of these wildcard characters to find text, numbers, and dates.

The asterisk tells File to match any number of characters in that position in the search criterion.

• ?

A question mark tells File to match any one character in that position.

You could use the asterisk, for example, to find all 1985 accounts by typing \*1985 in the field containing the dates.

Find	Clear		
Date	Last Name	First Name	Accou
1985			
0.00			

You could use the question mark to find all transactions from 12/20/85 to 12/29/85 by typing 12/2?/85.

When you use a wildcard character and a value as the search criterion in a date or number field, you must type the value in the same format (Short, Medium, or Long for Date fields, and Dollar, Percent, Decimal, General, or Scientific for Number fields).

You can use as many wildcard characters as you need, and you can use combinations of the two types of wildcard, if necessary. But you cannot use commas to specify more than one search item when you use a wildcard in a find field. Also, File cannot find records that have the \* or ? wildcard characters as values in fields.

As mentioned earlier in this chapter, File ignores upper- and lowercase when searching, so it doesn't matter whether you use capitalization in your search criteria or whether the use of capitalization is consistent throughout your records.

### The Clear Button

File saves information you type in the find window with the datafile (even if you quit File) until you delete it or type in new information. Each time you open the find window to do a new search, you'll see the search criteria for the last search you did displayed in that field. So you'll need to click the Clear button first to clear any previous search information.

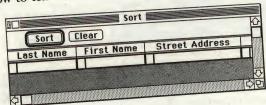
Find	Clear		
Date	Last Name	First Name	Accou
1985			

# Sorting

You use the Find... command to find records that meet the criteria you specify. You use the Sort... command to specify the order of records in a datafile. File sorts text fields alphabetically, number fields numerically, and date fields chronologically.

# **Using the Sort Command**

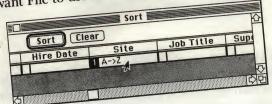
To have File sort the records in your datafile, choose the Sort... command from the Organize menu. When you do, the sort window appears. You use the sort window to tell File how to sort your records.



Note the similarity to the find window. The sort window contains a Clear button, which is used to remove previous criteria, similar to the find window. The major difference between the two windows is that, in the sort window, each field is divided into two parts: a large box on the right and a small box on the left. You can use the large box to specify whether you want the records sorted in ascending or descending order. After you select a field, File puts a number in the small box representing that field's position (first, second, third, and so on) in a multiple-field sort. This is called sort order.

# **Specifying Sort Criteria**

To specify the order in which you want your records displayed, click in the field you want File to use in sorting your records.



SECTION ONE Creating and Using a Datafile: The Basics of File The important thing to remember about p mands used to set up the page and print in the active window. When the command under the File is active, the print printing optithat wi

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Ampersand-C centers the characters that follow these characters. Ampersand-R aligns characters that follow these characters at the right margin.

Ampersand-D prints the current date from the Macintosh system calendar. Ampersand-P prints the Page number.

Ampersand-T prints the current time from the Macintosh system clock.

Double-ampersand includes a single ampersand in the header or footer text.

Typing &L Seattle Site&C,&P&R&D in the footer typing field would not be footer typing and site and ole-ampersand includes a single ampersand in the neader of rooter text.

Typing &LSeattle Site&C&P&R&D in the footer typing field would print the rage number in the center (hecause the name to the left margin, the page number in the center).

Typing &LNeattle Site &C&P&K&D in the tooter typing field would print the page number in the center (because the page number in the centering. &C). and Seattle Site at the left margin, the page number character for centering. and number character. &P. immediately follows the character for centering. Seattle Site at the left margin, the page number in the center (because the page-number in the center (because the page-number in the center (because the page-number in the centering, &C), and the character for centering for cente number character, &t, immediately follows the character tor centering, &C), are the current date at the right margin (because the current date at the right margin (because the current date at the right margin (because the current date). NS the character for right margin, & No.

File's margins are preset to the numbers you see in the Margin typing fields

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File's margins are preset to the numbers you see in the Margin typing fields

File's margins are preset to the numbers you see in the Margin typing fields File's margins are preset to the numbers you see in the Margin typing news in the Page Setup dialog box. To change any of them, simply double-click in the field you want to change and type a new number.

you want to change and type a new number.

In addition to using Page Setup... for printing for both form and report printing allows you to use senarate page setups for both form and report printing for both for both form and report printing for both for both for both form and for both for bo follows the character for right margin, &R). in addition to using Page Setup... for printing the records in your datance.

File allows you to use separate page setups for both form and report has its own Page Setup dialog hox:

Fach window (datafile form and report) has its own Page Setup dialog hox:

field you want to change and type a new number.

rue anows you to use separate page setups for both form and report printing.

Each window (datafile, form, and report) has its own Page Setup dialog how for whater the dialog has how f rach window (daranie, form, and report) has its own rage betup dialog box for whatever choosing Page Setup... from the File menu displays the dialog the name choose the command. File saves the name choose the command window is active at the time von choose the command. cnoosing rage Setup... from the rile menu displays the dialog box for whatever window is active at the time you choose the command. File saves the page-setup window with each window information with each window.

mation with each window.

The Page Setup dialog box for the datafile window as shown in Figure 9.1

The Page of printing records from the datafile window as shown in Figure 9.1 the one for printing records from the datafile working in the report window however When you choose Page Setup the one for printing records from the datanie window, as snown in Figure 2-1.

When you choose Page Setup... while working in the report window, however there are several differences. as you can see by comparing the dialog hove there are several differences. when you choose rage Setup... while working in the report window, nowever there are several differences, as you can see by comparing the Record Numbers Print Crid Lines and No Reads Returned that the Print Record Numbers there are several differences, as you can see by comparing the dialog boxes. It is a several differences, as you can see by comparing the dialog boxes. It is a several differences, as you can see by comparing the dialog boxes. It is a several differences, and No Breaks Between Page When First Column Changes that the Print Record Numbers, Print New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When First Column Changes that the Print Record with the Start New Page When information with each window. options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When First Column options are replaced with the Start New Page When Page

Figure 2-1. The Page Setup dialog boxes for the form window (top), the datafile window (center), and the report window (bottom)

ImageWriter (	Standard or Wid	de)	ОК
	Letter	○ R4 Letter	
	Legal	O International Fa	onfold Cancel
_	mputer Paper		
		all Adjusted O Wi	
		s O No breaks betwe	en pages
Reduction:	None 05	iO percent	
Page Header:			
Page Footer:			
Left Margin: 0	0.75	Right Margir	0.75
Top Margin: 1		_	
Top Margin.		Bottom Margir	n: 1
ImageWriter (S			OK
Paper:   US  US	Letter	O R4 Letter	
	nputer Paper	O International Far	ofold Cancel
	_	III Adjusted O Wid	
	Ų		
		O No breaks between	en pages
neddetion. (	Mone O 30	) percent	
Print Record	Numbers 🛛	Print Grid Lines 🔲	Mailing Label
Page Header:			
Page Footer:		-1	
Left Margin: 0.	75		
, <u>-</u>	73	Right Margin:	
Top Margin: 1		Bottom Margin:	1
ImageWriter (St		9)	OK OK
Paper:   US L		O R4 Letter	
O US L	egal Iputer Paper	O International Fan	fold Cancel
		II Adjusted ○ Wide	
Pagination:	Normal pages	ONo breaks betwee	
		percent	
Start new pag	je when first co	olumn changes	
Page Header:			
Page Footer:			
Left Margin: 0.7	25	Dight Many	0.75
Ion Margin:		Right Margin:	0.73

Figure 2-2. A page break in the middle of a field

1	Greenbrier	Andrew	1920 Chippewa Di	r. Bothell	WA	99211	5!
2	Hazelton	Suzanne	8017 - 52nd S.W		WA	98106	5!
3	Justice	Francis	6063 Gatehouse	Mukilte	O WA		5:
4	Salieri	Sharon	717 Campbell	Mukilte	O WA		5!
5	Bruce	Jack	5102 Pecks Driv	e Seattle	WA .	98209	5
_			continued				_
_				Slark	TA Genor	10	_
1	§55-1286	Feb 27, 1985	Mukilteo  C	ilerk	A. Genor		
1 2	55-9936	Mar 3, 1984	Mukilteo C	lerk	V. Genor	10	
3			Mukilteo C Seettle C Mukilteo C			rio ri	/

If List Helper is checked, File will print as many complete records as it can across the page, then begin the next record on the next page.

A problem can arise when printing records with non-List Helper forms. It is difficult to determine where the page break will occur, and occasionally the page break comes in the middle of a field, as shown in Figure 2-2.

The only way to determine how many fields will fit across a page is to use the Print Records... command and actually print the datafile. To get around wasting a lot of time repeatedly printing a large datafile just to get the page layout correct, you can select all the records in the datafile window except one, choose the Hide Records command from the Organize menu, and print the one record. Then, if you need to, adjust field widths and print just the one record again. Use this trial and error method until your page looks the way it should. Then use the Show All Records... command to display your entire datafile and the Print Records... command to print it. This is not a perfect solution, but it's the best we've found.

# **Generating Reports**

You can create reports using various combinations of the records displayed in the datafile window by using File's report functions. You can print these reports on your printer, or you can save the information in the report with the Save Report As... command in a text-only format, which allows you to use it with Microsoft Word's Print Merge feature. Before you create a report, you first need to determine which of the records in the datafile window you want included in the report. You can use all the records, or select only part of them by using File's Find... command or Hide Records command. When you go to the report window to create your report, File includes in your report only those records currently displayed in the datafile window.

Entering Dorta. Field & tab ofenter of mouse pointer Copic field to field & Command Copie date to field & Command -Copie time to field & (aumand; Morning with Datafile first field next record & enter. first field previous rec. - Shift-enter next seen records of option-after precions streen records - 8hif-option - enter ment same field & Command-enter. Searching in the Data fike Find = 7 is gelijk aan tind 47 or 74 & alles met dal Frid > 7 großer als Find >= 7 groter of gelyhals Find < en <= 7 klemer en klemer ofgetigk als Frid ... - 2 rock in het gehied opgegeven \* en? ? \* gelijh nittehennig nifield ? gelijh nittehennig honoliter nifield

Page Header & P. - print pagnia mumer Page Header & D. print achiele dahun Page Header & T. - print achiele dahun Page Header & T. - print achiele dahun Page Header & T. - print achiele dahun To create a report, after selecting the records you want included, choose Report... from the Organize menu. You will see a report window like this:

Previ	ew 🗆 Sumn	nary Report		
Sort	A->Z	A->Z	A->Z	Not Sorted
Heading	Site	Last Name	First Name	Street Addr
Field	Site	Last Name	First Name	Street Address
by First N	la			ottoct ilidal ess
by Last N	ar		1	1
by Site	1			
Grand				

# The Sort, Not Sorted, and Not Shown Areas

The report window is divided into these three areas: Sort, Not Sorted, and Not Shown.

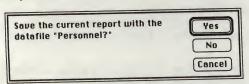
The fields in the Sort area are the ones that File will put in the first (leftmost) column of the report. If you sorted any records in your datafile window prior to choosing the Report... command, File will automatically place these sorted records in the Sort area of the report window and arrange them in the same order that you chose while you were in the datafile window. The leftmost field in the Sort area is the first field to be sorted. In the report window, you can change the sorting criteria you specified in the datafile window by using different fields in various sort orders. The direction of the sort for each field (A->Z or 1->9) is displayed at the top of each column in the Sort area. You can change the direction of the sort for a field by clicking in this box.

Heading Site Last Name First Name Street Address by First Na by Last Nai by Site Last Name First Name by Last Nai by Site	Previ	ew) 🗆 Sumn	Report	
Field Site Last Name First Name Street Address by First Na by Last Na by Site	Sort Heading			
by Last Nai	Field			Street Address
by Site Grand				
Grand				
	brand			

The Not Sorted area contains the rest of the fields that will be included in the report. Any fields that were not sorted in the datafile window will be included in this area.

The Not Shown area is for fields you do not want included in the report. When you choose the Report... command, any fields that you had dragged into the hide area of the form window are automatically placed in this area.

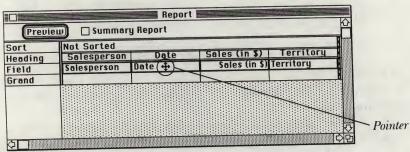
If you haven't previously chosen the Report... command for a datafile, File will place the fields in the datafile into the three areas of the report window as just described. If you create a report for a datafile, go back and make changes to the datafile (sorting records or hiding fields differently), and then choose the Report... command again, File will display the first report window you created, regardless of any changes you may have made to the datafile later. If you want to create a new report, you'll have to choose the New Report command from the File menu. If this is a new datafile, and you haven't quit File after opening the report window, the report in your report window will be saved with the datafile and the report window will reset to show the changes you have made. If you choose the New Report command again, you'll see the following dialog box asking you if you want to save the current report with your datafile.



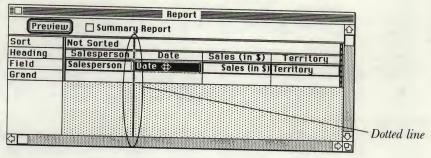
File will only save one report with a datafile, but you can save a report under its own name using the Save Report As... command from the File menu. That way you can have more than one report to use with a datafile.

# **Moving Report Fields**

After opening the report window by choosing the Report... command, you can drag fields from one area (Sort, Not Sorted, or Not Shown) to another. The area you drag a field into or out of has no relation to the sort arrangement or visibility of that field in the datafile window or form window. So you can create reports using the information displayed in the datafile window in a variety of useful ways, without having to rearrange or hide fields in your datafile window every time you want to create a different report. To move a field in the report window, position the pointer on the field you want to move in the Field row.



The pointer must be in this cross shape to drag fields. To drag, hold down the mouse button and move the field in the direction you want to move it. As soon as you start to move the field, a vertical line appears on the left or right side of the field, depending on which way you are moving it.



The position of the vertical line shows you where File will put the field when you release the mouse button. You can rearrange the fields within an area, or move them into another area. That way, if you decide you want to sort on fields other than those you currently have in the Sort area, or if you decide to hide other fields, all you need to do is drag the appropriate fields into the appropriate areas. Remember: The arrangement of the fields in the report window will not affect the arrangement of the fields in the datafile window or the form window.

# **Formatting Report Fields**

Formattting fields in the report window for aspects such as display, alignment, and style is independent of any formatting you do to the fields in the data-file window or form window. When you choose the Report... command and the report window opens, all fields initially have the formatting changes you made in the datafile or form window.

To change a field's format in the report window, you can either double-click on the field in the Field row, or click on the field once and choose Format Field... from the Form menu. When you take either action, depending on the type of field selected, one of the dialog boxes shown in Figure 2-3 on the next page appears.

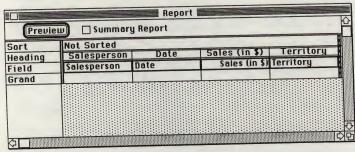
For all four types, the Border and, except for picture fields, the Underlined Style options are dimmed. Whether or not List Helper is checked has no bearing on field-formatting options in the report window, as it does in the datafile and form windows, since a report doesn't use the form to display information. Other than that, formatting fields in the report window is the same as formatting fields in the datafile or form windows.

Figure 2-3. The four Format Field dialog boxes for the report window

Format Date Field    Cancel	Format Number Field    Cancel
Format Text Field  OK  Cancel  Align  Cancel  Style  Border  Underline  Bold  Italic	Format Picture Field  OK  Cancel  Display  Clip  Scale

# **Summary Fields and Their Functions**

Summary fields are the blank fields under the field name and heading in the report window. Listed in the leftmost column of the report window are the descriptions of the Summary fields you can use. In a report with no sorted fields, the only summary option you have is Grand.



In the Grand row, you can use the options that File offers for providing summary information about each field for all of the records in your report. To assign summary information to a field, move the mouse pointer to the blank field in the Grand row below the field for which you want summary information displayed. The pointer reverses direction.

	Not Sorted			
Heading	Salesperson	Date	Sales (in \$)	Territory
Field	Salesperson	Date	Sales (in \$)	Territory
Grand	4			territory

Then, either double-click on the blank field, or select the blank field and choose the Format Summary Field... command from the Form menu. When you do, one of the dialog boxes shown in Figure 2-4 will appear, depending on the information type of the field.

Although the same dialog box appears for each type of field (text, number, date, or picture), only number fields allow you to use any or all of the options. For text, date, and number fields, the only option you have is Count. The following is a list of what the summary functions do:

### • Total

The Total function totals the numbers in the selected field and displays the result with the label Total.

Figure 2-4. The four Format Summary Field dialog boxes for the report window

Format Summary Field Grand Summary of "Hire Date"  Function  Total Count Ruerage Minimum Maximum Std. Dep.	Format Summary Field Grand Summary of "Management Skill Level" Function Total Count Herage Minimum Maximum Std. Dev.
Format Summary Field Grand Summary of "Employee Photo"  Function  Total Count Recrage Minimum Maximum Std, Bev,	Format Summary Field Grand Summary of "Site"  Function Total Count Ruerage Minimum Maximum Std. Dep.

### Count

The Count function counts up the number of records that contain information in the selected field and displays the total number of records with the label Count. This is the only summary option for text, date, and picture fields.

### Average

The Average function takes the average of the numbers in the selected field and displays the result with the label Average.

### • Minimum

The Minimum function displays the smallest number contained in the selected field, with the label Minimum.

### Maximum

The Maximum function displays the largest number contained in the selected field, with the label Maximum.

### • Std. Dev.

The Std. Dev. function computes the standard deviation for numbers in the selected field and displays the result with the label Standard Deviation. Standard deviation is the average variation from the average value of a group of numbers.

When you click an X in the box in front of the summary function that you want for that field, then click the OK button, File displays the chosen summary option for that field in the report window.

In a number field, you can choose any or all of the options you want by clicking an X in the box in front of the desired option in the Function list box. If you choose several options and click the OK button, you'll only be able to see a few of them displayed in the summary field you are formatting in the report window. To see them all you can temporarily widen the field.

As an example, a report generated with no sorted fields and all summary options chosen for all fields would look like the report shown in Figure 2-5.

When you move a field into the Sort area, you have another summary option. File creates a summary row for each field in the Sort area, and gives the row the same name as the sorted field, preceded by the word "by".

Previe				
Sort Heading	A->Z Salesperson	Not Sorted Date	Sales (in \$)	Territory
Field	Salesperson	Date	Sales (in \$)	Territory
by Salespe				
Grand				

Figure 2-5. A report with no sorted fields, showing all of the summary options

Salasperson	Date	Sales (in \$)	Territory		
Andersen	Nov 5, 1985	\$5,130.00		•	
Parker	Nov 5, 1985	\$2,944.00			
Jackson	Nov 5, 1985	\$1,930.00			
Lowry	Nov 5, 1985	\$3,254.00			
Parker	Nov 6, 1985 -	\$6,100.00			
Lowry	Nov 6, 1985	\$4,420.00			
Jackson	Nov 6, 1985	\$6,290.00			
Andersen	Nov 6, 1985	\$4,100.00			
Parker	Nov 7, 1985	\$3,342.00			
Lowry	Nov 7, 1985	\$2,060.00			
Andersen	Nov 7, 1985	\$2,765.00			
Jackson	Nov 7, 1985	\$3,150.00			
Total:		\$45,485.00			
Count: 12	12	12	12		
Average:		\$3,790.42	12		
Minimum:		\$1,930.00			
Maximum:		\$6,290.00			
Standard Devi	ation:	\$1,445.72			

This allows more summary options in your report. For example, Figure 2-6 shows a printed sample report that has only one sorted text field and uses no summary options.

Figure 2-6. A sample report with one sorted field and no summary options

Figure 2-7. A sample report with one sorted field and the Count function applied to the summary row

Salesperson	Date	Sales (in \$)		
Andersen	Nov 5, 1985	\$5,130.00		
	Nov 7, 1985	\$2,765.00	South	
	Nov 6, 1985	\$4,100.00	South	
Count for And	ersen:			
Jackson	Nov 5, 1985	\$1,930.00		
000110011	Nov 6, 1985	\$6,290.00		
	Nov 7, 1985	\$3,150.00	North	
Count for Jac	kson:	3		
Lowry	Nov 7, 1985	\$2,060.00	North	
203	Nov 6, 1985	\$4,420.00	North	
	Nov 5, 1985	\$3,254.00	North	
Count for Lov	wry:	3		
Parker	Nov 5, 1985	\$2,944.00	South	
1 di Koi	Nov 6, 1985	\$6,100.00	South	
	Nov 7, 1985	\$3,342.00	South	
Count for Pa	rker:	3		
002				

Notice that the sorted text field combines all records containing the same text in the sorted field and prints them as a group, with the text contained in the field printed only once to identify the group. Figure 2-7 shows the same report with the Count summary option selected in the By Salesperson row.

Figure 2-8 shows how the same report would look if the Count function

were applied to the Grand row instead of the By Salesperson row.

As you can see, any summary formatting applied to a sorted row will act only on the records contained in that sort group. Summary information applied to the Grand row, however, acts on all the records in the report. You can combine row and Grand summaries to get information on sorted groups of information as well as information about the entire report.

To remove summary formatting information from a field, simply select the formatted summary field in the appropriate row and press the Backspace key.

Figure 2-8. A sample report with one sorted field and the Count function applied to the Grand row

Salesperson	Date	Sales (in \$)	Territory	
Andersen	Nov 5, 1985	\$5,130.00		
	Nov 7, 1985	\$2,765.00		
	Nov 6, 1985	\$4,100.00	South	
Jackson	Nov 5, 1985	\$1,930.00	North	
	Nov 6, 1985	\$6,290.00	North	
	Nov 7, 1985	\$3,150.00	North	
Lowry	Nov 7, 1985	\$2,060.00	North	
	Nov 6, 1985	\$4,420.00	North	
Danton	Nov 5, 1985	\$3,254.00		
Parker	Nov 5, 1985	\$2,944.00		
	Nov 6, 1985	\$6,100.00		
	Nov 7, 1985	\$3,342.00	South	
Count:	12			

# **Previewing**

Previewing your report on the screen before printing it lets you see exactly how it will look when printed. If you preview the report first, you can make changes to it without wasting printing time and paper. This way, you only need to print the report on paper when you know you have exactly what you want.

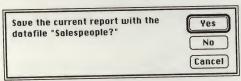
To preview a report, simply click the Preview button in the report window and the report will be "printed" on the screen. To stop the report from scrolling up the screen when you want to look at a particular section, click the Pause button. The Pause button changes to Resume when you click it. Click the Resume button to see the rest of your report displayed on the screen. Click the Done button to return to the report window, then make any necessary changes before printing on paper.

# **Printing Reports**

As mentioned earlier in this chapter in the printing discussion, you can print a report with File's default margins, using standard-size paper and no header or footer by choosing Print Report... from the File menu. If you wish to change margins or add a header or footer to the printed report, use the Page Setup... command from the File menu the same way you do when you print records. When you save the report, File saves the Page Setup information with it so you only need to specify this once, not each time you print the report.

# Saving a Report

File saves one report with each datafile. When you finish creating a report, it's a good idea to choose the Save Report command from the File menu to save the report with the datafile. If you haven't created a report for a datafile before, File will save the report with the datafile automatically; but once you have a report exactly the way you want it, it's a good idea to choose Save Report anyway. That way, if you make any changes to the report that you don't want to keep, you'll know that File has already saved a copy of the report. When you quit File, if you have already saved a report with the datafile, File will display the following dialog box if you've made any changes:



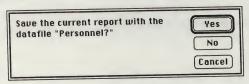
If you've chosen the Save Report command earlier when the report was exactly what you wanted, you can just click the No button and know that you

have a copy that looks the way you want.

If you want more than one report for your datafile, you can save a report separate from the datafile by choosing the Save Report As... option from the File menu and saving the report under its own name. Then when you want to print the displayed records in that datafile using that report, open the report window and choose Open Report... from the File menu, double-click on the name of the report in the list box, and print the report.

# Resetting the Report Window

There may be times when you'll want to reset the report window. For instance, let's say you are working with a datafile, and you want to design a new report. So you open the report window, but you see a previous report form. Just choose New Report from the File menu. If you've already saved the report and haven't made any changes to it, the Report window will be reset, placing fields from your most recent sort in the Sort area, fields from the hide area of the form window in the Not Shown area of the report window, and all other fields in the Not Sorted area. If you have made changes or haven't saved the report with your datafile, File will display this dialog box asking if you want to save the report with the current datafile.



Click No if you don't want to save it.

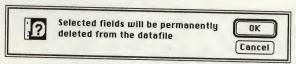
# **Maintaining Your Datafiles**

File is a flexible program that allows you to change your datafiles if your needs change. If you find that you need a new field, you can go into the form window and add that field at any time. Then you can switch to the datafile window and fill in the information you need.

It's a good idea to go through your datafiles periodically and delete information you're no longer using. If, for example, you have a field you thought you'd need when you set up the datafile but find you're no longer using, you may want to delete that field. That way, information you see on your screen will be only what you need and use, and you'll free up storage space on your disk.

# **Deleting a Field**

To delete an entire field from a datafile, first open the form window. Select the field you wish to delete and press the Backspace key. Before deleting the field, File asks you to confirm your decision.

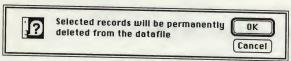


This extra confirmation step may seem inconvenient, but it could save you from deleting something you didn't intend to delete.

At times you may wish to clear the current information from a field in one of your records. This is an easy task. Simply select the information in the field by dragging the mouse pointer across it, and then choose Clear from the Edit menu or press the Backspace key.

# **Deleting a Record**

File also allows you to delete an entire record. To delete a record, click on the record number at the beginning of the record you want to delete to select the entire record; then choose Clear from the Edit menu or press the Backspace key. When you delete a record, File asks for confirmation.



Click OK and the record is deleted, the other records move up to fill the space, and their numbers change to reflect their new positions. Also, the number in the box in the lower left corner is reduced to show the current number of records in the datafile. There may be times when you would like to skip the confirmation. File has a way to delete without confirmation. Select what you want to delete, hold down the Option and Command keys, then press the Backspace key.

You can delete more than one contiguous record at once. Simply drag across the record numbers of those records you want to delete to select them. Then press the Backspace key or choose Clear from the Edit menu.

# Hints for Working with File

The following are some hints for working with File that you may want to keep in mind:

• Choose the correct information type.

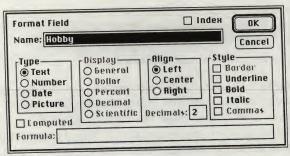
It's important when you set up your form to make correct decisions about the information types of the fields: Text, Number, Date, or Picture. Once you've entered data in the datafile window or quit File, you cannot go back and change the information type of a field. If you discover you've made an error, all is not lost. There is a way around this limitation. Delete the field that contains the wrong information type. (Any data in this field will, of course, be lost when you delete the field, so you may want to print out the records first.) Then add a new field in the form window and give it the correct information type. Then re-enter the information.

• Format computed fields when you create the number field.

Any number fields that will have formulas to do computations should be formatted as computed fields as soon as you add them to your form. After you enter data or quit File, you cannot change a regular number field to a computed number field. But if the field is a computed number field, you can go back at any time and change a formula, or experiment and try new formulas.

• Know when to format fields.

You can skip formatting fields altogether and accept File's default formats, or you can format each field individually immediately after choosing its information type. If you plan to format each field immediately after choosing its type, pressing Command-D after you type the field name and before pressing Return will give you a dialog box so you can choose the information type and format the field in one step.



I suggest that the first few times you work with File, you don't format any fields except computed fields until after you enter some data. When you begin entering data, you'll see File's default displays. Then you can format only the ones you don't like and you won't have to do any extra work changing ones that are fine the way they are. Later, as you learn what File's defaults are and become more certain about your own preferences, you may find it quicker to format fields as you create them—right after choosing the information type.

• Sort before opening a new report.

When you're creating a report, you can use either the Sort... command to sort the records in the datafile and then open the report window, or you can drag the fields you want sorted into the Sort area after opening it. Using the Sort... command before opening the report window to specify the fields you want sorted and their sort orders in the sort window is easier than dragging each field you want sorted into the Sort area of the report window.

• Use indexed fields if you search and sort often.

If you're likely to search frequently on the same field, you can make that field an indexed field. Indexed fields take more disk space, but do speed up searches considerably. To index a field, click the Index box in the Format Field dialog box.

• Don't be afraid to use several disks.

As you're setting up datafiles (for, let's say, payroll, personnel, inventory, and other uses), it's a good idea to use a new disk for each project. That way, if you label the disks clearly, your organization will be clear and you'll be less likely to run out of disk space.

Make one disk your "skeleton" disk—that is, a disk that contains empty copies of all your datafiles and forms. As soon as you create a new datafile and form, it's a good idea to choose the Save Form As... command from the File menu in the form window and give the form its own name. Then click anywhere in the datafile window and click the Close box in the datafile window to save both the form and the datafile under their own names onto a disk you reserve for archival purposes. That way, if anything happens to your form (if you accidentally choose List Helper for a non-List Helper form that you spent hours creating), you won't have to go through all the steps involved in creating the form from scratch again, and, if your working datafile fills the disk it's on, you can copy the skeleton of the datafile onto another blank disk.

Construct all of your datafiles on blank disks rather than on your working copy of the File Master disk. This will preserve the File disk and, again, you'll be less likely to run out of disk space. When typing in the name for a new datafile, be sure to click the Drive button if necessary so the name of your data disk appears in the box. That way File will create the file on your data disk.

Don't be reluctant to use many disks and to back up your datafiles on separate disks. Compared to the time and effort involved in constructing

datafiles, disks are cheap.

Now that you know the basics—how File is structured and the elements involved in constructing datafiles, you're ready to use File. The next chapters give step-by-step instructions for creating datafiles for businesses. Chapters 3 and 4 show how to construct personnel and payroll datafiles in the quickest and easiest way—using File's List Helper. The following chapters detail more advanced uses for File. You might want to start by working through Chapter 3; that will give you a good understanding of how to work with File. After that you can pick and choose from the remaining chapters; there is no prescribed order. Start with any application that looks interesting and useful, tailor it to your specific needs, and then continue on. You'll be amazed at how many of the routine, repetitive filing and data-management tasks File will do for you. When you finish setting up personnel, payroll, inventory, and sales, and start using File regularly, you'll wonder how you ever did business before you had File and your Mac.



Genorio's is a small Seattle delicatessen with two locations. It began three years ago as a "mom-and-pop" deli, managed and staffed entirely by Victor and Angela Genorio. But the business has grown, and now the Genorios have two locations with a total of 20

employees, and they're open evenings and Saturdays.

The Genorios have reached a point where they need a database system to help them keep track of their personnel and payroll. They need to be able to make employee lists for each site and each shift; they need lists of people able to work weekends and evenings; they need a list of employees and emergency contact numbers they can post by the telephone; and, especially important, they need to be able to keep all of this information current. Genorio's attracts young employees who change addresses and phone numbers frequently. This is not a problem except that, to keep their records straight, Genorio's needs a system that's easy to update.

The Genorios chose File and the Mac to record and store their personnel information. With this information on File, they'll be able to find employee information quickly. They'll be able to arrange this information in any number of categories in a fraction of the time it would take to do manually. They'll be able to update it easily and have consistent records—the same information for each employee. If one of their managers comes in asking for a list of all employees on the morning shift at his site, they'll be able to print a list for him in minutes. If the second manager comes in with a weekend scheduling problem, they'll be able to find all employees whose schedule preference is weekends, and print a

list for her while she waits.

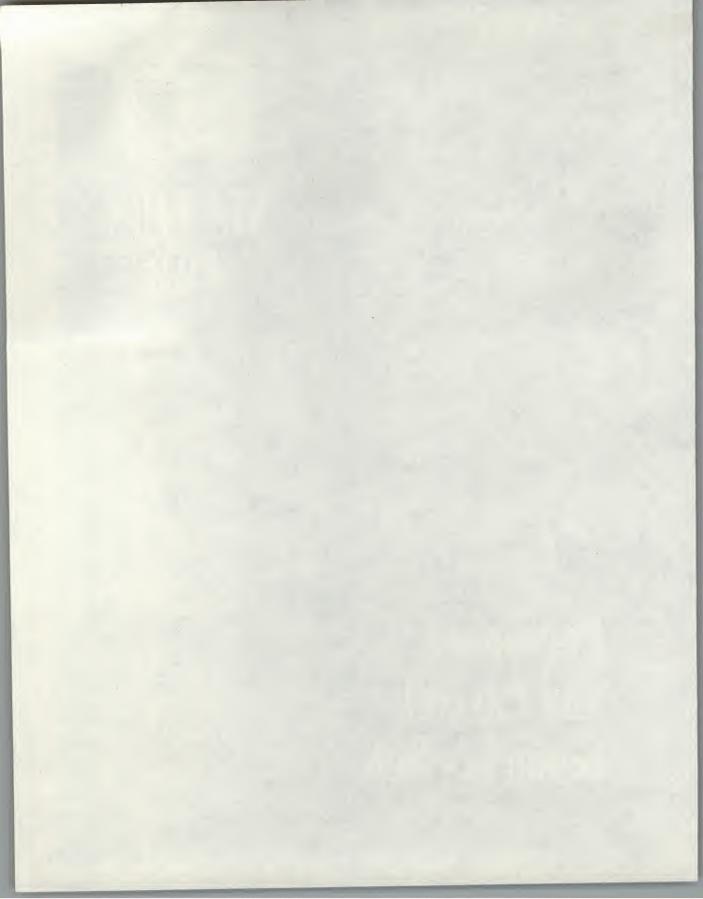
In this section, you'll learn how to put your personnel and payroll records on File and the Macintosh. Chapter 3, Basic Personnel Records for Genorio's, gives step-by-step instructions for creating a personnel datafile for a small business, Genorio's Deli, and

then shows how to organize information in this datafile.

Chapter 4, Using File for Payroll, shows how to add payroll information to the personnel datafile, how to produce monthly payroll reports, and how to keep a master payroll ledger. Genorio's is interested in saving time, and plans to use File monthly to compute gross pay, FICA (Federal Insurance Contributions Act or Social Security deductions), the total FICA contribution (the employer's and the employee's), and net pay. They'll print a monthly payroll report totaling all employees' gross pay, deductions, and net pay, add this information to a master payroll file, and print a cumulative payroll report. These reports will have all the information needed to complete the required quarterly Form 941 to report withholding and FICA and to complete end-of-year employee withholding information on Form W2.

# SECTION TWO

Personnel and Payroll: Genorio's Deli





# Personnel

Before the Genorios can sit down at the computer and start typing in their data, they need to determine what categories of employee information they want to keep track of. They will then record this information in appropriate fields and arrange the fields in an efficient, logical order. (As mentioned in Chapter 1, fields are simply categories of information.)

The Genorios came up with this list of fields, which covers all of the categories of information they need:

- Last Name
- First Name

Last Name and First Name are separate fields so last names can be sorted alphabetically.

- Street Address
- City, State
- Zip

Zip is a separate field so records can be sorted numerically by zip code.

- Phone
- Hire Date
- Site

The Site field records whether the employee works at the Seattle store or the Mukilteo store.

- Job Title
- Supervisor

# • Management Skill Level

The Genorios use this field to rank the management experience of their employees. It's a number field. Rankings range from 0 to 3. A 0 indicates no experience; a 3 indicates an experienced manager.

### • Birthdate

Mrs. Genorio still thinks of the Deli as a small, friendly mom-and-pop operation, and she likes to send each employee a birthday card, so she wants this date included in the record.

- Emergency Contact
- Emergency Phone
- Shift Preference

Genorio's has two shifts: 7 a.m. to 3 p.m. and 3 p.m. to 11 p.m. They can use this field to record each employee's preference.

### Weekends

The Weekend field is used to record whether an employee is willing to work on Saturdays. A Yes indicates a willingness to work Saturdays; a No indicates a preference for weekdays only.

### Status

This field is used to indicate whether the employee's status is part-time (PT) or full-time (FT).

### Comments

Comments is a text field that can be used for comments about an employee's schedule or status. Comments like "No more than 30 hours a week" or "Desires full-time position" or "Will work weekends, if absolutely necessary" belong here.

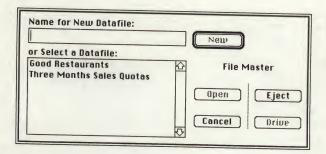
You may want to make a list similar to this for your own business. You'll want to add pertinent fields not listed here and omit those fields you don't need. Don't worry if you don't think of everything you might ever want to record. One of File's handy features is its ability to accept additional fields at any time. If, for instance, you later decide that you need a Social Security number field, it's easy to add one.

# Starting File

When you have determined what kinds of information you want to keep and what fields you want in your records, you're ready to start File.

□ Double-click on the Microsoft File icon.

After a short while, File is loaded and ready, and you'll see a dialog box asking you to select an existing datafile or type in a name of a new one.



Depending on whether you want to create a new datafile or are working on an existing one, you will either type in a name for a new datafile and click the New button or select an existing datafile from the list in the dialog box and click the Open button.

Because this is a new datafile, you need to name it. As usual, it's best to give it a descriptive name so you'll immediately know what's in that file when you see the datafile icon.

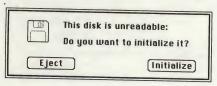
□ In the Name for New Datafile typing field, type a descriptive word or phrase, such as *Genorio's Personnel* (or the name of your business followed by *Personnel*), to name this datafile.

Notice that the New button, which was dimmed when the dialog box first appeared, became active (changed from gray to black) as soon as you started to type the name of the datafile.

You'll be saving your datafile on a data disk, so make sure you have a blank disk in the external drive.

□ If you don't have a blank data disk in the external disk drive, insert one now.

If the disk hasn't been initialized yet, you'll see this dialog box:



□ Click the Initialize button to initialize the data disk.

After a while, another dialog box is displayed, asking you to name the disk.

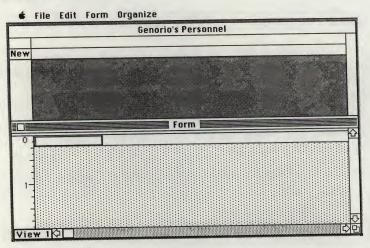
□ Type something descriptive like *Personnel Data* as the name of the disk, then click the OK button or press the Return key.

Name for New Datafile: Genorio's Personnel	New
or Select a Datafile:	Personnel Data
	Open Eject
	Cancel Drive

Notice that the name displayed below the New button, which tells you the disk that File will use to store your datafile, has changed from File Master to Personnel Data. Because Personnel Data is the disk you want to use, tell File that Genorio's Personnel is a new datafile you want to save on the Personnel Data disk by using the New button.

□ Click the New button.

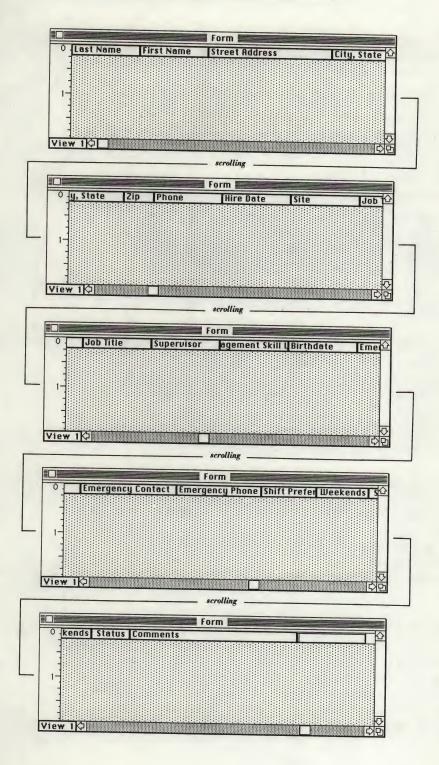
Your screen will look like this:



# **Creating the Form**

The first step in setting up a new datafile is to design the form in which you want your data displayed. When you open a new datafile, File automatically displays a default form called a List Helper form. As an example, we'll use a List Helper form as the form for Genorio's personnel records. The form for Genorio's personnel records is too wide to be viewed on the screen at one time, but if you scrolled horizontally it would look like the screens shown in Figure 3-1.

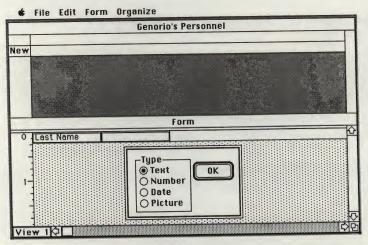
Figure 3-1. The form for the Genorios' Personnel datafile



To create this form, enter one at a time the field names from the list you developed before starting File. To enter the fields from the Genorios' list (or to enter the fields from your own list):

☐ Type Last Name as the name of the first field and press Return.

After you enter a field name and press the Return key, a dialog box appears, asking for the type of information that will be stored in that field. (Your choices are Text, Number, Date, or Picture.)



Notice the dot in the button in front of Text. The dot indicates that Text is File's default information type, the type File automatically uses unless you specify another type by clicking one of the other buttons.

□ Press the Return key to accept File's default option.

You could click the OK button instead of pressing Return, but since your hands are still at the keys from having typed the field name, it's faster to use the keys to accept the default.

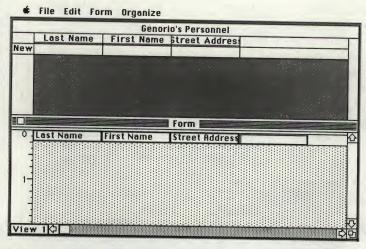
Last Name is now a text field and the blinking insertion point has moved to the next field in your form. Because the next field will also be a text field, you can again accept File's default option and choose the Text information type.

□ Type *First Name* and press Return twice, once to enter the field name and display the information type options, and a second time to accept the default option and move the insertion point to the next field.

As you may recall from Chapter 1, File has a shortcut for choosing the Text information type. After typing the field name, simply press Return twice and Text will be chosen as the information type. That way, you skip the Information Type dialog box and clicking the OK button. If the field is a date, number, or picture field rather than a text field, you will have to type the field name,

press Return once, choose the correct information type from the dialog box, click the OK button or press Return, and continue to the next field.

□ Type Street Address and press Return twice.



The third field (Street Address) is also a text field, even though it may contain some numbers. A field that will contain letters or spaces must be created as a text field, because a number field can't contain letters or spaces. For instance, the address 920 Chippewa Drive is a text field because it contains letters and spaces, as well as numbers.

□ Continue entering the field names and their corresponding information types from the following list (or your own list).

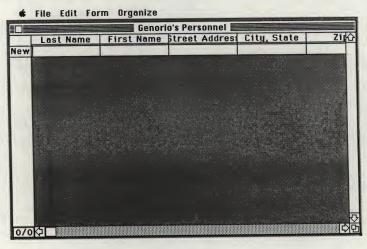
Field Name	Information Type
City, State	Text
Zip	Text
Phone	Text
Hire Date	Date
Site	Text
Job Title	Text
Supervisor	Text
Management Skill Level	Number
Birthdate	Date
<b>Emergency Contact</b>	Text
<b>Emergency Phone</b>	Text
Shift Preference	Text
Weekends	Text
Status	Text
Comments	Tout
Comments	Text

# **Entering Data**

What you've just done is construct a simple form. You've used a List Helper form and accepted most of File's other defaults. Now you'll make the datafile window active and enter some data so you can get a clearer picture of the List Helper form. You'll enter information for two employees (either two of your own or two from the Genorios' sample). Having some data displayed will make it easier to see which fields need formatting changes—which need to be made wider so we can see more of our information on the screen, and which need other format changes.

☐ To move from the form window to the datafile window, either click the close box in the form window or simply click anywhere in the datafile window.

When the datafile window is active, the form window disappears.



☐ To begin entering data, click to get an insertion point in the Last Name field to the right of the word New (if the insertion point isn't already there).

You're starting a new record. Now you're ready to enter information for two of your own employees or to enter the sample information for the first two Genorio employees.

□ Type *Greenbrier* (or the last name of one of your own employees) and press Return.

This moves you to the next field, First Name. If you need to return to a previous field, you can either move the mouse pointer to the field you want to move to and click, or you can hold down the Shift key and press Return, and you'll move backward to the previous field. You can go backward to the previous field or forward to the next field any time to correct or change information.

A record is assigned a number as soon as you start typing it. The record numbers indicate the order you entered the records. File will display the records in this order whenever you open the datafile. A little later in this chapter, you'll learn how to change this order by using commands from the Organize menu.

□ Continue entering information to complete one employee record. When you complete the last field for the first record, press Return.

Pressing Return takes you to the first field of the next record.

☐ Enter the information for the second employee record, as shown in Figure 3-2 on the next page.

Recall from Chapter 1 that if the information in one field of your datafile is the same for several successive records, you can type the information once, then use the Command key and the apostrophe (') key to repeat the information from the previous record if the insertion point is in the same field of the next record.

# **Customizing the Screen**

Now you have employee records for two employees in the format shown in Figure 3-2. After you enter information in a default format like this, you need to look at it and evaluate it for its appearance and aesthetic appeal. Then you can make changes to its appearance by formatting it differently.

Formatting is a matter of individual preference. There are no hard and fast rules. I like to see all the information in each field on the screen; I don't like to have to scroll within a field to see what's there. So I always make my fields large enough to display all the text in them at once. My analysis of the Genorios' Personnel form is that some of the fields need to be wider and some narrower, so the field sizes are a better match for the amount of information stored in the field. Then the text in several field names (which are displayed as the column headings) should be shortened so we don't have a wide field name for a field that contains a small amount of information. Then, for cosmetic reasons, I'd center text in one of the fields. Here's a list of the specific changes I'd make:

- Lengthen the Street Address field
- Shorten the Zip field
- Change the Management Skill Level title to Mgmt Skill
- Center the Mgmt Skill number
- Lengthen the Emergency Contact field
- Lengthen the Emergency Phone field
- Change Shift Preference title to Shift Pref
- Shorten the Shift Pref field
- Shorten the Weekends field
- Shorten the Status field
- Lengthen the Comments field

If all these changes were made, the data for two employees would look something like the records shown in Figure 3-3.

Figure 3-2. Fields in two employee records before formatting changes

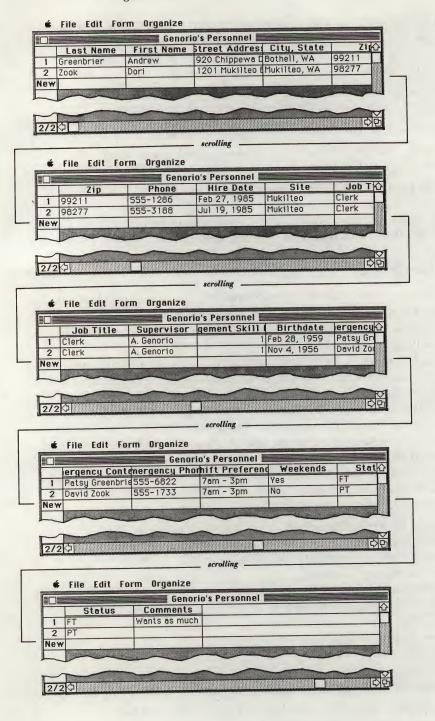
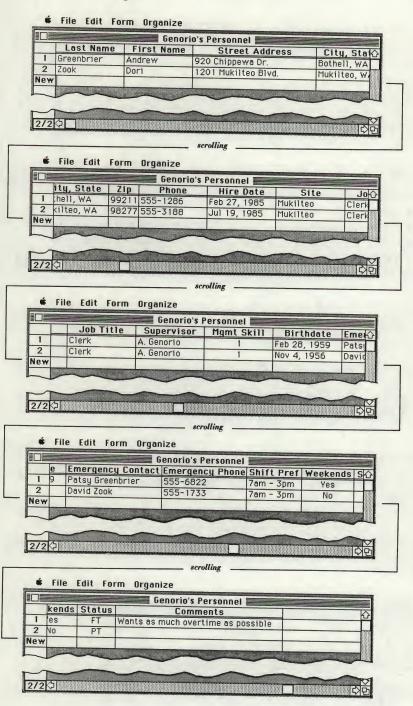


Figure 3-3. Fields in two employee records after formatting changes



To make these changes to customize Genorio's Personnel datafile, you need to know how to:

- Change the field size
- Change the heading text
- Change the field alignment or format

Let's take a look at how to perform these changes one at a time, starting with changing field sizes.

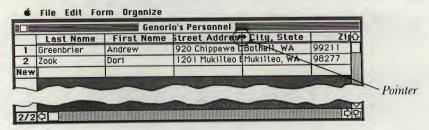
# Changing a Field's Size

When the List Helper command on the Form menu is checked, File allows you to make changes either in the form window or in the datafile window. I prefer making changes in the datafile window, the window that's active now, because that way I don't have to flip back and forth from the form window to the datafile window. Any changes that I make to the field size, alignment, or format in the datafile window with the List Helper command checked will automatically be made to the form.

To change the Street Address field's size:

□ Move the mouse pointer to the right edge of the box containing the Street Address field heading.

The pointer changes shape and now looks like this:



□ Hold down the mouse button and drag the right edge of the Street Address box to the right about 1 inch. Release the mouse button when the box is the size you want (long enough to accommodate most addresses).

Last Name   First Name   Street Address + City, Stake						
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell, WA		
2	Zook	Dori	1201 Mukilteo Blvd.	Mukilteo, W		
lew						

If you want the Street Address field a different size, simply move the mouse pointer to the right edge of the box and drag it to the right or left until it's exactly the size you want. (Notice that the heading text automatically centers itself to adjust to the new size of the box.)

□ Follow this same procedure to customize your own form.

To make your form look like the sample form: Shorten the Zip field, lengthen the Emergency Contact and Emergency Phone fields, shorten the Shift Preference, Weekends, and Status fields, and lengthen the Comments field so these fields accommodate the amounts of text you want to make visible.

# **Changing Heading Text**

Now let's modify some of the column headings (the field names you typed earlier in the form window) so that they more closely match the lengths of the entries under them.

To change the heading text:

□ Move the mouse pointer to the heading you wish to change.

In our sample, we're changing Management Skill Level to Mgmt Skill. So, scroll left by using the horizontal scroll bar until Management Skill Level is visible.

□ Use the mouse to select the characters *anagement* by positioning the I-beam to the right of the *t*, holding down the mouse button, and dragging to the left across the letters *anagement*.

	Genorio's Personnel						
	Job Title	Supervisor	anagement Sk	Birthdate	Emek		
1	Clerk	A. Genorio		28, 1959	Patsu		
2	Clerk	A. Genorio		4, 1956	David		
Vew				.,	100110		
		Contract Contract		0.00			

 $\Box$  Type *gmt* as the replacement characters.

		Genorio's Personnel						
	Job Title	Supervisor	Mgmt Skill	Birthdate	Emek			
1	Clerk	A. Genorio	1	Feb 28, 1959	Patsu			
2	Clerk	A. Genorio		Nov 4, 1956	David			
lew								

As soon as you start typing, the selected text disappears and is replaced by what you type.

- □ Scroll the text in the box until the word *Level* is visible by positioning the I-beam anywhere in the heading, holding down the mouse button, and dragging to the right.
- □ Select the word *Level* by dragging to the right across the entire word or by double-clicking on the word itself.

*	File Edit Form	Organize					
Genorio's Personnel							
	Job Title	Supervisor	Level	Birthdate	Emel 心		
1	Clerk	A. Genorio	1	Feb 28, 1959	Pats		
2	Clerk	A. Genorio		Nov 4, 1956	David		
New							
		$\sim$					
~							
			$\sim$		V		
2/2	<b>5</b>				中心		

- □ Press the Backspace key to delete it.
- □ Now click anywhere in the window to move the insertion point and center your heading.

1	Job Title	Supervisor	Mgmt Skill	Birthdate	Emek
1	Clerk	A. Genorio		Feb 28, 1959	Pats
2	Clerk	A. Genorio	1	Nov 4, 1956	David
lew					
			a professional constraint		

□ Follow these steps to edit the headings in your own form.

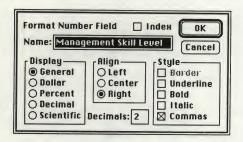
To make your form look like the sample, follow the above steps to change the Shift Preference heading to Shift Pref.

# **Changing the Alignment of Field Entries**

As a final formatting touch, we'll change the alignment of some of the fields from File's default (left aligned for text and date fields, right aligned for numbers) to centered.

To change the alignment of text or numbers in fields:

- Move the mouse pointer to the first field under the Mgmt Skill heading and click an insertion point with the mouse button to make that field active.
- □ Pull down the Form menu and choose Format Number Field....



Notice that the field name is still Management Skill Level, just as you first entered it in the form window. This is because File allows you to change field headings in the datafile window and still leave the field name untouched in the form window.

Click the Center button in the Align list box. Click the OK button to carry out the command.

Now the management skill levels in all your records will be centered. You can follow this procedure to change the alignment of any fields in your own forms, although the Format command from the Form menu may be different, depending on the information type you specified for the field (for example, if you selected a text field, the Format command would be Format Text Field...). To make your form look like the sample form, for instance, follow these steps to center the Weekends and Status text fields:

 Click in the first field under the Weekends heading, choose Format Text Field... from the Form menu, click Center in the Align list box, then click OK. Repeat these steps for the Status field.

# Organizing Your Data: Finding and Sorting

You've created a form to display your employee data, entered this data, and customized the datafile window. Now, at last, you can put File to work finding records that match certain criteria and sorting them for you. And don't worry; you won't have to rummage through papers in file folders and then collate them as you would if you were doing the same task by hand.

First, to give File more entries to search through and choose among, let's type the names and information for the rest of Genorio's employees, as shown in Figure 3-4, or your own employees.

Figure 3-4. A complete printout of the Genorios' Personnel datafile

_	Last Name	First Name	Street Address	City, State	Zip
1	Greenbrier	Andrew	920 Chippewa Dr.	Bothell, WA	99211
2	Zook	Dori	1201 Mukilteo Blvd.	Mukilteo, WA	98277
_	Andrews	Kaaren	1212 - 5th St.	Mukilteo, WA	9827
4	Norris	Joe	607 Madison	Seattle, WA	9813
	McFadden	Shella	611 Oak Knolls	Seattle, WA	9820
6	Brooks	Karen	132 N. London	Seattle, WA	9820
7	Beaman	Jason	419 Queen Anne Ave.	Seattle, WA	9810
8	Genor10	Victor	603 1st Ave.	Seattle, WA	9812
9	Genorio	Angela	603 1st Ave.	Seattle, WA	9812
10	Salieri	Sharon	717 Campbell	Mukilteo, WA	9822
11	Bruce	Jack	5102 Pecks Drive	Seattle, WA	9820
12	Justice	Francis	6063 Gatehouse	Mukilteo, WA	9822
	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle, WA	9810
	Allendorfer	Barbara	404 Ocean	Seattle, WA	9810
	Larkin	Mike	6291 - 8th Ave.	Mukilteo, WA	9827
	Davis	Kate	2012 - 23rd Ave.	Mukilteo, WA	9827
-	McDonald	Heather	212 Cedar	Mukilteo, WA	9827
	Lei	Tiffany	6022 - 12th Dr.	Mukilteo, WA	9827
	Oliver	Hardy	3315 Sound Vista	Seattle, WA	9813
20		Tracy	2075 33rd Ave. W.	Seattle, WA	9813

continued

_	Phone	Hire Date	Site	Job Title	Supervisor
1	555-1286	Feb 27, 1985	Mukilteo	Clerk	A. Genorio
2	555-3188	Jul 19, 1985	Mukilteo	Clerk	A. Genorio
3	555-4698	Jul 19, 1985	Mukilteo	Clerk	A. Genorio
4	555-9991	Dec 1, 1985	Seattle	Stocker	S. McFadden
5	555-7366	Oct 1, 1983	Seattle	Site Manager	V. Genorio
6	555-3481	Mer 3, 1984	Seattle	Clerk	V. Genorio
7	555-1033	Aug 15, 1985	Seattle	Clerk ·	S. McFadden
8	555-5209	Jan 1, 1975	Seattle	Owner	
9	555-5209	Jan 1, 1975	Seattle	Owner	
io	555-4922	Jul 12, 1984	Mukilteo	Site Manager	A. Genorio
ii	555-9272	Jul 12, 1984	Seattle	Clerk	S. McFadden
12	555-9316	Jan 15, 1985	Mukilteo	Clerk	S. Salieri
13	555-9936	Mar 3, 1984	Seattle	Clerk	V. Genorio
14		Aug 10, 1985	Seattle	Clerk	S. McFadden
15		Oct 3, 1984	Mukilteo	Stocker	S. Salieri
16		Oct 3, 1985	Mukilteo	Clerk	S. Salleri
17	555-6933	Jul 19, 1985	Mukilteo	Clerk	S. Salieri
18		Feb 23, 1985	Mukilteo	Clerk	A. Genorio
19		Dec 1, 1985	Seattle	Clerk	V. Genor1o
20	555-5539	Mar 30, 1985	Seattle	Clerk	V. Genorio

continued .

			Emergency Contact	Emergency Phone
	Mame CVIII		Emer yerrog out	
_	rigint 3km	1F80 ZO, 1939	Patsy Greenbrier	555-1733
1			David Zook	555-3899
2		Aug 10, 1966	Kirsten Andrews	555-0110
3	0	Jun 13, 1968	Pamela Norris	555-1102
4	0	Apr 12, 1953	Andrew McFadden	555-3351
5	2	May 17, 1950	Susan Brooks	555-3432
6	0	Jul 1, 1964	Sarah Beaman	555-5209
7	0	Jul 1, 1904	A. Genorio	555-5209
8	3	May 17, 1932	V Genorio	
9	3	Jan 16, 1936	Wolfgang Salieri	555-1627
10	2	Oct 1, 1949	Sandy Diert	555-8945
11	1	Jul 14, 1952	Alyce Justice	555-7762
12	0	Jun 28, 1953	Jeff Clark	555-6311
	1	Feb 14, 1956	Andrea Allendorfer	555-3398
13	1	Aug 8, 1967		555-3711
14		Oct 14, 1968	Bill Larkin	555-1616
15	^	Jun 10, 1967	ICherdi paria	555-6933
16		Nov 1, 1968	Paul Hebonare	555-7100
17	7	Mar 25, 1965	Dustin Lei	555-3001
11		Jan 28, 196.	Tiffany Oliver	1555-5539
1	9 2	Jan 20, 190		1999-9999
12	0 1	Oct 31, 196	0 100	

continued

				04-440	Comments
-	Shift Pro	ef We	ekends	Status	Wants as much overtime as possible
$\dashv$	7am - 3pr	n	Yes	1	Walles as mass
늰	7am - 3pt	n	No	PT	1- (-11 time
2	7am - 3pi	m	No	PT	Wants full time
3	78m - 3p	nm	Yes	PT	Wants full time
4	3pm - 11	om	Yes	FT	Good mgmt candidate
_	3pm - 11	Pini	No	PT	No more than 20 hrs/week
6	7am - 3p	-	No	PT	1-noment
7	3pm - 11	pm	110	+	Must look for replacement
8		-		-	Ready to retire from FT management
9		_	- Una	FT	
10		1pm	Yes	FT	
11	3pm - 1	1pm	No	FT	Wants mgmt training
1	2 3pm - 1	1pm	No	FT	No evenings
	7am - 3	pm	No	PT	THO O'S THE STATE OF THE STATE
1		11pm	Yes		
1	5 3pm -	11pm	Yes	PT	Wants full time
	6 3pm -	11pm	No	PT	
_	7 3pm -	11pm	Yes	PT	
	8 7am -	3nm	No	FT	
L	9 7am -	3nm	Yes	FT	
L	20 7am -	3pm	Yes	F	

Remember, if you have fields in two or more successive records that are the same, you can speed things along by using Command-apostrophe. For example, if most of your employees' City, State field entries are Seattle, WA, you may not need to type Seattle, WA each time. When you get to a field that needs the same information as the corresponding field in the previous record, simply hold down the Command key and press the apostrophe key. File will copy the information from that field into the current field.

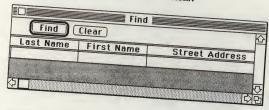
You can also speed things along if you have a Date field that you want to contain today's date. Instead of typing the date, you can hold down the Command key and press the hyphen key and File will instantly copy today's date into the current field from the Macintosh system calendar.

# **Finding Data**

To show you how quickly File can locate data, we'll find all the employees at the Mukilteo site for the Mukilteo manager and list all employees willing to work weekends or evenings for the Seattle manager. To find specific information:

☐ Choose Find... from the Organize menu.

You'll see a dialog box that looks like this:



- □ Scroll through the fields in the Find window (by clicking on the horizontal scroll bar or arrow at the bottom of the Find window or by dragging the horizontal scroll box) until you get to the Site field.
- ☐ Click in the Site box in the Find window.
- ☐ Type Mukilteo (in any combination of uppercase and lowercase letters—File ignores case when searching for records).
- □ Click the Find button to start the find.

If you scrolled the datafile window horizontally to the right, you'd see that only the records of employees who work at Mukilteo are now displayed.

	Last Name	First Name	o's Personnel Street Ad	Site	Jok
•	Greenbrier	Andrew	920 Chippewa 7	ukilteo	Clerk
2	Zook	Dori	1201 Mukilto	Mukilteo	Clerk
3	Andrews	Kaaren	1212 - 54	Mukilteo	Clerk
4	Salieri	Sharon	717 CF 1984	Mukilteo	Site
5	Justice	Francis	6067 6, 1985	Mukilteo	Clerk
6	Larkin	Mike	3, 1984	Mukilteo	Stock
7	Davis	Kate /	Oct 3, 1985	Mukilteo	Clerk
8	McDonald	Heather	Jul 19, 1985	Mukilteo	Clerk
9	Lei	Tiffany	Feb 23, 1985	Mukilteo	Clerk
		Tittong/			
Vew					
	100				

File places only the records that match the search criterion in the datafile window. These records may not include all the records in your datafile. The two numbers in the lower left corner tell you how many were located; the number on the left is how many records match the criterion, the number on the right is how many records there are in the datafile.

If you want to see all the records in your datafile again, choose the Show

All Records command from the Organize menu.

Each time you use the Find... command, File searches through all the records in your datafile—even records that are not visible in the datafile window—to find those that match the criterion.

You can use two wildcard symbols with the Find... command to search for text, numbers, or dates. The asterisk is a wildcard symbol that stands for a string of characters. For example, if you typed Muk\* in the Site field, File would find all records whose site field contained the first three letters Muk. The asterisk tells File to disregard characters following the k.

The ? wildcard symbol tells File to match any one character in the ? position. For example, if you occasionally misspell Mukilteo as Mukiltio and you want to find all occurrences of both Mukilteo and Mukiltio, you can type Mukilt?o in

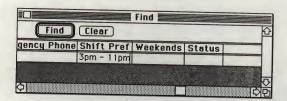
the Find window.

# Multiple search criteria

Now we'll follow basically the same steps we used in finding all of the Mukilteo employees to find all employees who are willing to work both weekends and evenings.

- □ Choose Find... from the Organize menu.
- □ Click the Clear button to remove all previous search criteria (in this case, Mukilteo in the Site field).

- □ Scroll the Find window right until you see the Shift Pref field.
- □ Click in the Shift Pref field to make it active. Type 3pm 11pm, the evening shift.



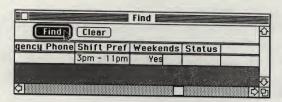
Be sure you type it just as you did when you actually entered it in the Shift Pref field of your datafile. Remember, computers are literal—they only know what you type, not what you mean.

Now specify the second search criterion.

□ Click in the Weekends field.

We want to find all employees whose Weekends field contains Yes.

□ Type Yes in the Weekends field. Then click the Find button.



While File searches, you see a status line at the bottom of the screen telling you how many records have been searched and how many have been found. Soon you'll have your list of employees willing to work evenings and weekends.

	Last Name	First Name	io's Personnel Street Address	City Ct-1/
1	Norris	Joe	607 Madison	City, Stak
2	McFadden	Sheila	611 Oak Knolls	Seattle, WA
3	Salieri	Sharon	717 Campbell	Seattle, WA Mukilteo, WA
4	Allendorfer	Barbara	404 Ocean	Seattle, WA
5	Larkin	Mike	6291 - 8th Ave.	Mukilteo, WA
6	McDonald	Heather	212 Cedar	Mukilteo, W.
New				Hukirteo, WA

You can use the following symbols to further qualify those records you want File to find:

Symbol	Action
=	Matches exactly what you type Does not match what you type Matches anything greater than what you type Matches anything greater than or equal to what you type Matches anything less than what you type Matches anything less than
•••	Matches anything less than or equal to what you type Matches anything within the range you specify

For example, if you wanted File to find all employees with a management skill level of 2 or 3, you would specify:

Supervisor	Mgmt Skill	Birthdate	Tr
	>= 2	Birtinate	Em

If you wanted all February birthdays, you would specify:

 Find Cle				
Mgmt Skill	Bir	thdate	Emergency C	ontac
	Feb *		3-109	ontac
				and the second

This tells File to find all dates in the Birthdate field that begin with Feb, regardless of what comes after Feb. While conducting this search, File will ignore the day and year.

# **Sorting Data**

You use the Find... command to find records with fields that meet a certain criterion. You use the Sort... command to change the order of records. File sorts text fields alphabetically, number fields numerically, and date fields chronologically, in either ascending or descending order. In a preceding example, we used the Find... command to locate all the employees who work at the Mukilteo site. Now we'll use the Sort... command to order that list alphabetically by last name.

File sorts only the records in the datafile window. Right now, the records in the datafile window are those found in the most recent search you performed (the search for employees willing to work evenings and weekends). So you need

to put the records for all employees back in the datafile window before you can begin to sort them.

□ Choose Show All Records from the Organize menu.

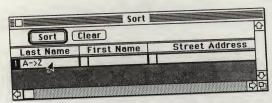
Now you can once again have File search for the records for the Mukilteo store's employees.

□ Choose Find... from the Organize menu, click the Clear button, then type *Mukilteo* in the Site field, and click the Find button.

		First Name	o's Personnel Street Address	City, Stat
	Last Name	Andrew	920 Chippewa Dr.	Bothell, WA
1	Greenbrier		1201 Mukilteo Blvd.	Mukilteo, W
2	Zook	Dori	1212 - 5th St.	Mukilteo, W
3	Andrews	Kaaren	717 Campbell	Mukilteo, W
4	Salieri	Sharon	6063 Gatehouse	Mukilteo, W
5	Justice	Francis	6291 - 8th Ave.	Mukilteo, W
6	Larkin	Mike	2012 - 23rd Ave.	Mukilteo, W
7	Davis	Kate	212 Cedar	Mukilteo, W
8	McDonald	Heather	6022 - 12th Dr.	Mukilteo, W
9	Lei	Tiffany	B022 - 12th br.	
lew				

To sort these employees alphabetically by last name:

- □ Choose the Sort... command from the Organize menu.
- ☐ In the Sort window, click on the Last Name field.



The A->Z indicates that the records will be sorted in ascending alphabetical order. Your only other choice would be Z->A, or reverse, order. If you wanted the list sorted in reverse (descending) order, you would click in the Last Name box again and the order would change to Z->A. Clicking once more returns it to A->Z.

□ Click the Sort button.

Quickly, File arranges the records on the screen in the order you specified.

-	Last Name	First Name	io's Personnel	
2 3 4 5 6 7 8 9	Andrews Davis Greenbrier Justice Larkin Lei McDonald Salieri Zook	Kaaren Kate Andrew Francis Mike Tiffany Heather Sharon	Street Address  1212 - 5th St.  2012 - 23rd Ave.  920 Chippewa Dr.  6063 Gatehouse  6291 - 8th Ave.  6022 - 12th Dr.  212 Cedar  717 Campbell  1201 Mukilteo Blvd.	City, Ste Mukilteo, W Mukilteo, W Bothell, WA Mukilteo, W,
7/20	Ø			

You can specify more than one sort order. The 1 in the small box on the left side of the field in the Sort window is the sort order number. A 1 indicates that field is your first sort order, a 2 indicates the second sort order, and so on. If you wanted a list of employees at the Mukilteo site sorted by supervisor and, within each supervisor list, the employees listed alphabetically, you would first use the Find... command to find all records with Mukilteo in the Site field, then choose the Sort... command and specify Supervisor as the first sort order and Last Name as the second sort order by selecting the Supervisor field first and then the Last Name field. If you change your mind about the order after you've selected the fields, click the Clear button in the Sort window and then reselect the fields in the order you want them sorted.

- □ Click in the Supervisor field, then the Last Name field.
- □ Click the Sort button.

If you scroll to the right, you'll see the new order.

	Last Name	Supervisor	Personnel		
2 3 4 5 6 7	Andrews Greenbrier Salieri Zook Lei Davis Justice .erkin	A. Genorio A. Genorio A. Genorio A. Genorio A. Genorio S. Salieri S. Salieri	0 1 2 1 1 0 0	Birthdate Aug 10, 1966 Feb 28, 1959 Oct 1, 1949 Nov 4, 1956 Mar 25, 1965 Jun 10, 1967 Jun 28, 1953	Eme Kirst Pats Wolf David Dust Cherr
	1cDonald	S. Salieri S. Salieri	1	Oct 14, 1968 Nov 1, 1968	Alyce Bill L Paul

If you often use this group of records in this order, you may want to save only these records in this sort order as a separate datafile. You can choose the Save Records As... command from the File menu and then give this version of the datafile a new name.

□ To save the current sort order, choose Save Records As... from the File menu, type *Supervisor Sort* or some other descriptive name, and then click the Save button. If necessary, click the Drive button before clicking the Save button to make sure the file is saved on your data disk in the external drive.

Danasida Ger	Personnel Data
Save Records As: Supervisor sort	Save
Normal Text (Microsoft Print Merge)	Cancel Drive

You'll see a status line at the bottom of your screen that shows you how many records are being saved. When the status line disappears, the title bar at the top of the datafile window shows you that the name of the current datafile is Supervisor sort, the datafile you just saved.

	Land Namo	First Name	Street Address	Mukilteo, W.
1 2 3 4 5 6	Andrews Greenbrier Salieri Zook Lei Davis Justice	Kaaren Andrew Sharon Dori Tiffany Kate Francis	1212 - 5th St. 920 Chippewa Dr. 717 Cempbell 1201 Mukilteo Blvd. 6022 - 12th Dr. 2012 - 23rd Ave. 6063 Getehouse	Bothell, WA Mukilteo, WA
8 9 Nev	Larkin McDonald	Mike Heather	6291 - 8th Ave. 212 Cedar	Mukilteo, W

To get back to the Genorios' Personnel datafile, choose Open Datafile... from the File menu, and double-click on the name of your personnel datafile.

The Find... and Sort... combination is a powerful tool. You could use the Find... command to locate all employees hired before 1985, for instance, and then use the Sort... command to order the list chronologically by date. Or you could find all employees who have the same supervisor and sort them alphabetically. You could find all employees with a management skill level greater than 1, sort the list by management skill level, and send each a job description for an open supervisor's position.

We've covered just a few ways to organize datafiles. As your files become more complex, you'll discover more interesting, useful ways to sort and organize the information you've stored. In the next chapter, we'll add more information to our personnel file, use the Sort... command to organize it, and then learn to print reports containing the information we've specified, in the order we want it.

For now, if you want to see a paper copy of the information contained in your personnel file, choose the Print Records... command from the File menu. If you're using an ImageWriter printer and continuous-feed paper, press Return when the Print dialog box appears to accept File's printing defaults and begin printing the records.





# **Payroll**

In this chapter, you'll learn how to add payroll information to the personnel datafile that you developed in Chapter 3. You could keep payroll and personnel information in separate datafiles, but having both in one datafile makes it easier to update files: You don't need to enter the same information in two different places. If, for example, an employee leaves or information about that employee changes, only the personnel datafile needs to be changed. Consolidating payroll and personnel information in one datafile conserves disk space. Also, since File allows you to view information through different forms and those forms can be designed to display only those fields you want to view in the datafile window, you'll learn how to create a payroll form (in addition to your personnel form) that displays only the pertinent payroll information, but not the rest of the personnel information.

You'll learn how to use File to compute gross pay, the employee's FICA (Federal Insurance Contribution Act—Social Security) deduction, the total FICA contribution (both the employer's and employee's portion), and net pay. Then you'll see how to print a monthly payroll report totaling all employees' gross pay, deductions, and net pay. You'll add this information to a master payroll file that you'll learn how to create later in this chapter and from that you'll be able to print cumulative payroll reports. These reports will have all the information needed to complete the required quarterly Form 941 used to report withholding tax and FICA deductions and the W2 form used to complete end-of-year employee withholding tax information. The Genorios do payroll on a monthly basis, but the same basic procedures apply to weekly and biweekly payroll

We'll first examine the one-time payroll form setup. Then, we'll look at the monthly payroll tasks. The initial setup procedure includes the following steps:

Adding payroll fields to the personnel datafile

 Creating a separate payroll form for displaying only the fields from the personnel datafile that are needed to do payroll

 Creating a payroll skeleton—that is, a partial datafile to use each month when entering that month's payroll information

The payroll skeleton will contain employee information that doesn't change from month to month, such as employee names, hourly rates for hourly employees, and gross pay and withholding tax for salaried employees. By creating a skeleton datafile that you can reuse, you won't have to reenter information that doesn't change from month to month.

• Creating a payroll master datafile, a place to keep a copy of payroll records for an entire year

• Creating three reports: a monthly payroll summary, a cumulative summary by month, and a cumulative summary by employee

The payroll tasks you'll do each month include:

 Making a copy of the payroll skeleton datafile to use to enter the current month's data

Entering your monthly payroll information

 Copying the completed payroll information from the current month into the payroll master datafile

 Printing the monthly report and the two cumulative reports (by month and by employee)

After you complete the one-time setup and start using File for payroll, before the procedures become automatic, you can use this section as a checklist when you do payroll each month.

Consider your needs and work through this chapter carefully. Setting up a payroll system for your business will take some time. But once you've completed the initial payroll setup, your work will pay off: File will take over the majority of the work, and you'll only have the short list of monthly tasks.

# **Adding Payroll Fields**

The Genorios have determined that they want to add the following payroll fields to their personnel datafile:

Date

The Date field is needed to group payroll records by pay period. The Genorios pay their employees once a month, so they use this field to group records by month. But you can group records by week if you pay weekly, by two-week intervals if you pay biweekly, or by any other pay-period interval.

#### · No. of Hours

Information from hourly employees' time cards is recorded here at the end of the month.

### • Hourly Rate

How much the employee earns per hour is recorded in this field.

## • Gross Pay

File multiplies the number of hours by the employee's hourly rate to determine the gross pay.

## • Withholding Allowances

This field contains the number of deductions that have been claimed on the employee's W4 form.

# Withholding

In this field, you'll enter the amount of withholding for each employee from the withholding table in the Internal Revenue Service's Circular E.

#### • FICA

File computes the value for this field. For 1985, it is 7.05 percent of the gross pay.

#### Total FICA

This field contains both the employee's and employer's FICA tax, which is 14.1 percent in 1985. The employee contributes 7.05 percent and the employer matches this with the other 7.05 percent. File computes the value for this field.

#### Total Deductions

This field adds the employee's FICA and withholding deductions to produce a total needed for completing quarterly reports and for computing net pay.

# • Net Pay

This field contains the result of subtracting the FICA and withholding deductions from the gross pay, which tells you the amount of the paycheck.

You'll need to make a list similar to this for your own payroll needs. You may have deductions specific to your state that you'll want to add. You may also have group insurance deductions. Make your list as complete as you can right now. But once again, if you don't think of everything now, File will let you go back and add new fields later.

When you have completed your list, you're ready to add the fields to your personnel datafile.

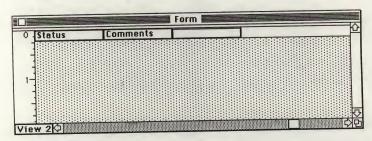
- □ Start File and open your personnel datafile.
- □ Select Show Form from the Form menu.

□ Click in the View 1 box in the lower left corner of the form window to change to view 2.

Cast Name			Genori	o's Personnel		
Greenbrier	_	Last Name	First Name	Street Address	City, State	Zij
2         Zook         Dori         1201 Mukiltee Mukiltee, WA         98277           3         Andrews         Kaaren         1212 - 5th St.         Mukiltee, WA         98277           4         Norris         Joe         607 Madison         Seattle, WA         98133           5         McFadden         Sheila         611 Oak Knolls         Seattle, WA         98209           6         Brooks         Karen         132 N. London         Seattle, WA         98209           7         Beaman         Jason         419 Queen Anna Seattle         WA         98106           Form	1			920 Chippewa D	Bothell, WA	99211
3 Andrews         Kaaren         1212 - 5th St.         Mukilteo, WA         98277           4 Norris         Joe         607 Medison         Seattle, WA         98133           5 McFadden         Sheila         611 Oak Knolls         Seattle, WA         98209           6 Brooks         Karen         132 N. London         Seattle, WA         98209           7 Beaman         Jason         419 Ougen Anna Seattle         WA         98106	2			1201 Mukilteo E	Mukilteo, WA	1
4         Norris         Joe         607 Madison         Seattle, WA         98133           5         McFadden         Sheila         611 Oak Knolls         Seattle, WA         98209           6         Brooks         Karen         132 N. London         Seattle, WA         98209           7         Beaman         Jason         419 Oueen Anne Seattle         WA         98106           Form				1212 - 5th St.	Mukilteo, WA	98277
5         McFadden         Sheila         611 Oak Knolls         Seattle, WA         98209           6         Brooks         Karen         132 N. London         Seattle, WA         98209           7         Beaman         Jason         419 Oueen Anne Seattle         WA         98106           Form         CVA ShAr         730				607 Madison	Seattle, WA	98133
7 Reaman Jason 419 Queen Annol Seattle, WA 98209 Form				611 Oak Knolls	Seattle, WA	98209
7 Reaman Jason 419 Queen Annel Seattle WA 198106.						98209
Form Form	7			419 Queen Anne	Seattle WA	198106
Isi the Istract Address City State Zin	ń			Form		
A light Name Triest Name IStreet nutres attitude to the			IFirst Name	Tetroot Address	Citu. State	Zip
	$\Box$	II act Name				
	0	Last Name	I I I I I I I I I I I I I I I I I I I			
]	0	Last Name	First Name	5((66)		
1-	0	Last Name	Markanie	J ( j g g v ) i dan e s		
]  -  -	0	Last Name	rii s ( Name	ST SECTION OF		
1-1	0	Last Name	First Name	3,1,667,10010-		

File saves two forms with each datafile, called view 1 and view 2. View 1 of the personnel datafile is the personnel form and view 2 will be the payroll form.

□ Drag the horizontal scroll box at the bottom of the form window to the right until you can see the blank field to the right of the Comments field.



□ Click an insertion point in the blank box following Comments.

You enter the field names the same way you did for the personnel fields: First type the field name, then press Return, then choose the information type (Text, Number, Date, or Picture).

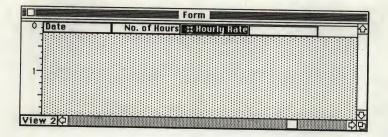
- □ Type *Date* (the name of the first field) and press Return. Press the D key to choose the Date information type.
- □ Press the Return key to tell File you've finished choosing the information type.
- You could click the Date button instead of pressing the D key, then click OK instead of pressing Return. But it's faster to use the keys since your hands are at the keyboard from having typed the field name.

The next field (No. of Hours) is a number field.

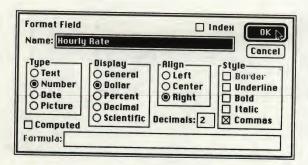
 $\square$  Type No. of Hours, press Return, press the N key to choose Number, and press Return.

The next field, Hourly Rate, is a number field that we want displayed in the dollar format—that is, numbers will be preceded by a dollar sign and have two decimal places.

- □ Type *Hourly Rate*, press Return, press the N key to choose Number, and press Return.
- □ Click on the Hourly Rate field to select it.



- □ Choose Format Number Field... from the Form menu.
- Click the Dollar button in the Display list box, then click the OK button.



Numbers entered into this field in the datafile window will be displayed in the dollar format.

The next field (Gross Pay) is a computed number field because the number displayed will be the result of multiplying the number of hours worked and the hourly rate. Type in its name and choose the information type (Number) the same way you did for the other fields. Then we'll go through the steps to enter a formula in it for computing gross pay.

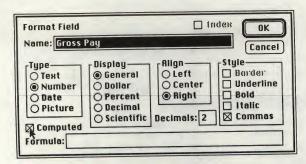
- □ Click an insertion point in the next blank field to the right.
- □ Type *Gross Pay*, press Return, press the N key to choose Number, and press Return.

Next, you need to tell File that Gross Pay is a computed number field—that is, a field that contains a formula. It is important to do this now, right after creating the field. If you leave the form window and enter a number in the Gross Pay field, you can't later go back to the form window and change the field from a regular number field to a computed number field.

□ Select the Gross Pay field by moving the mouse pointer to it and clicking the mouse button.



- □ Choose Format Number Field... from the Form menu.
- □ Click in the Computed check box.



This tells File that Gross Pay is a computed number field. Notice that the Formula typing field below the Computed check box changed from dimmed to normal as soon as you clicked the Computed box. Next, tell File to display this number in the dollar format.

 $\hfill\Box$  Click the Dollar button in the Display list box.

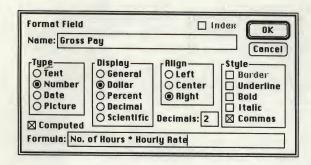
Now you're ready to enter a formula for the Gross Pay field.

□ Click in the Formula typing field.

Notice the blinking insertion point in the Formula typing field. File is waiting for you to type a formula. The formula you'll enter here will compute the gross pay by multiplying the number of hours worked by the employee's hourly rate.

Multiplication in File is represented by an asterisk (\*) instead of the common × symbol.

□ Type No. of Hours \* Hourly Rate.



□ Press Return.

The next field (Withholding Allowances) is a regular number field.

- □ Click an insertion point in the next blank field to the right.
- □ Type the field name *Withholding Allowances*, press Return, press the N key (for Number), and press Return.

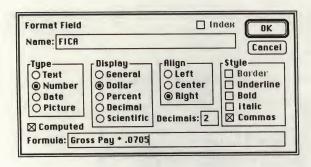
The next field (Withholding) is a number field displayed in the dollar format, just like the Hourly Rate field.

- ☐ Type Withholding, press Return, press the N key to choose Number, and press Return.
- □ Click on the Withholding field to select it.
- □ Choose Format Number Field... from the Form menu.
- □ Click the Dollar button in the Display list box, then click the OK button.

Numbers entered into this field in the datafile window will now be displayed in the dollar format.

The next field (FICA) will be a computed number field that will be displayed in the dollar format. The steps are the same as for the Gross Pay computed field above.

- $\hfill\Box$  Click an insertion point in the next blank field to the right.
- □ Type *FICA*, press Return, press N to choose Number as the information type, and press Return.
- Click in the FICA field and choose Format Number Field... from the Form menu. In the dialog box, click the Computed check box and the Dollar button in the Display list box, and then click an insertion point in the Formula typing field.
- □ Type Gross Pay \* .0705.

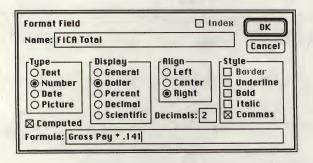


□ Press Return.

The employee FICA deduction for 1985 is 7.05 percent of the gross pay. File will calculate this and put the result in the FICA field.

The employer must match the employee's FICA deduction and contribute another 7.05 percent, making the total FICA amount owed 14.1 percent. The next field, FICA Total, calculates this.

- □ Click an insertion point in the next blank field.
- □ Type FICA Total, press Return, press N for Number, and press Return.
- □ Click on the FICA Total field to select it. Choose Format Number Field... from the Form menu. Then click the Computed check box, the Dollar button in the Display list box, and in the Formula typing field.
- $\square$  Type Gross Pay \* .141.



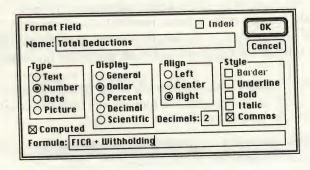
□ Press Return.

Next, add the FICA and Withholding figures (plus any other deductions that may apply to your business) in the next field (Total Deductions).

- □ Click an insertion point in the next blank field.
- □ Type *Total Deductions*, press Return, press N for Number, and press Return.

Instead of clicking in the Total Deductions field and then selecting Format Number Field..., you can simply double-click in Total Deductions to display the Format Field dialog box.

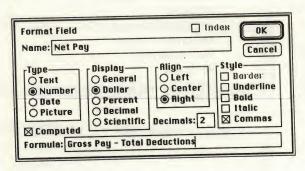
- Double-click on Total Deductions to display the Format Field dialog box. Then click the Computed box, the Dollar button in the Display list box, and in the Formula typing field.
- □ Type FICA + Withholding.



□ Press Return.

The last additional field is Net Pay. It is a computed number field that subtracts the FICA and withholding deductions from the gross pay.

- □ Click an insertion point in the next blank field.
- □ Type Net Pay, press Return, press N for Number, and press Return.
- Double-click on Net Pay to display the Format Field dialog box. Click the Computed check box, the Dollar button in the Display list box, and in the Formula typing field.
- □ Type Gross Pay Total Deductions.

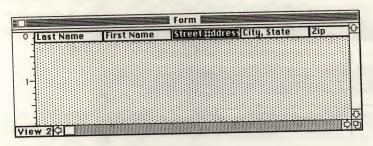


□ Press Return.

File will add the FICA and withholding deductions in the Total Deductions field and subtract these from gross pay to produce the net pay in this field.

To select all of these fields:

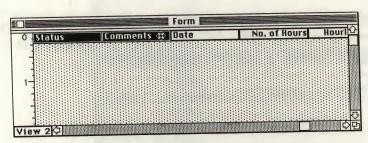
- □ Scroll the form window all the way to the left.
- □ Hold down the Shift key and click in the first field you want to move (Street Address). Continue holding down the Shift key.



□ With the Shift key still depressed, click in the next field you want to hide (City, State).

You can scroll while continuing to hold down the Shift key (to continue extending the selection of fields). Just move the mouse pointer to the horizontal scroll bar, box, or arrow, use it as you normally would, then move the pointer back to the form window and resume clicking on fields.

□ Continue holding down the Shift key and clicking until you have selected all the rest of the fields you want to hide. When all of the fields you want to hide are selected, release the Shift key.

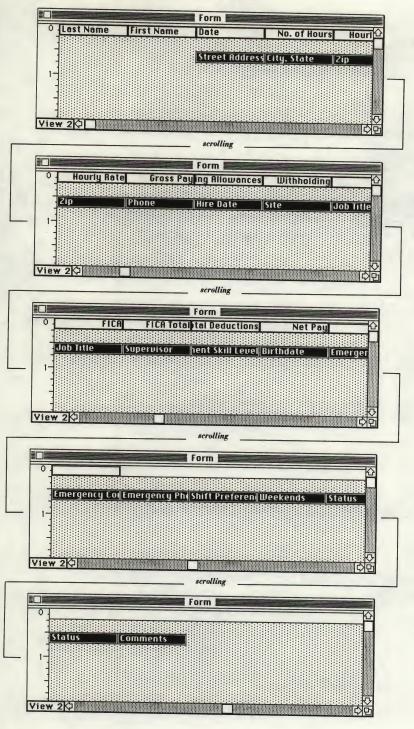


Now drag the fields into the hide area.

- □ Position the mouse pointer on any one of the selected fields.
- □ Drag the selected items straight down into the hide area, then release the mouse button.

As soon as you release the mouse button, all of the fields to the right of any field you moved to the hide area are shifted left to fill the space vacated by the hidden fields. Now your payroll form looks something like the form for Genorio's Deli shown in Figure 4-2, if you scroll horizontally.

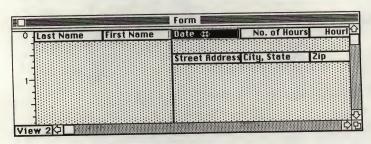
Figure 4-2. Payroll form for Genorio's Deli



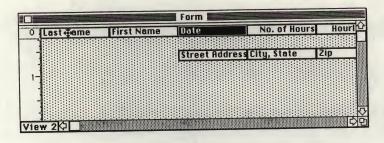
The only thing left to do is to move the Date field in front of the Last Name field. Having the Date field first will make it more obvious which month's payroll information we're working with.

To move the Date field:

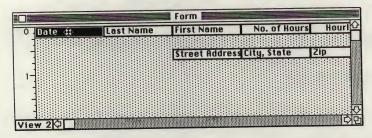
- □ Move the scroll box in the form window all the way to the left.
- □ Position the mouse pointer in the Date field.
- □ Drag the Date field to the left. As you start to drag the field, a long vertical line shows where File will place the field.



□ Continue dragging the field to the left. When the vertical line is at the left edge of the form window, covering the left edge of the Last Name field.



□ Release the mouse button.



The Date field moves so that it is now the first field on the left, and our payroll form is complete.

# Creating the Skeleton Datafile

Since the information in the Hourly Rate and Withholding Allowances fields won't change from month to month, it's a good idea to enter information in these fields first and then duplicate the datafile. The datafile can then be used as a skeleton, which can be copied each month for entering that month's payroll information. That way you won't have to retype the information that doesn't change.

The datafile window is the place to enter information.

□ Click anywhere in the datafile window to make it active.

The form window disappears and the datafile window is now active.

		Genor	io's Personnel		
	Date	Last Name	First Name	No. of Hours	Hourly
1		Greenbrier	Andrew	The state of the s	mour run
2		Zook	Dori		
3		Andrews	Kaaren		
4		Norris	Joe		
5		McFadden	Sheila		
6		Brooks	Karen		
7		Beaman	Jason		
8		Genorio	Victor		
9		Genorio	Angela		
10		Salieri	Sharon		
11		Bruce	Jack		
12		Justice	Francis		
13		Hazelton	Suzanne		
14		Allendorfer	Barbara		
15		Larkin	Mike		
16		Davis	Kate		
17 20/20	F 9999000000	McDonald	Heather		

□ Click anywhere in the horizontal scroll bar at the bottom of the screen to scroll right.

This brings the fields you need to use (Hourly Rate and Withholding Allowances) into view.

- □ Click an insertion point in the Hourly Rate field for your first employee.
- □ Type in the hourly rate for the first employee. (Remember, don't type a dollar sign—you've already formatted the field for dollar display.)
- □ Press the Return key.

		Genori	o's Personnei		
	Hourly Rate	Gross Pay	holding Allow	Withholding	FICK
1	\$6.00	\$0.00			
2		\$0.00			
3		\$0.00			
4		\$0.00			
_		-			_
					1
15		\$0.00			
16		\$0.00			
		\$0.00			

When you press Return, note that the insertion point bypasses the Gross Pay field and goes on to the Withholding Allowances field. This is because Gross Pay is a computed field—what it contains depends on what the No. of Hours and Hourly Rate fields contain (not what you type into it).

□ Type the number of deductions claimed on your employee's W4 form in the Withholding Allowances field, then press the Enter key.

Pressing the Enter key takes you to the first field of the next record, so you can see the name of the next employee.

□ Press the Return key four times to bypass the Last Name, First Name, and No. of Hours fields.

			o's Personnel		
	Last Name	First Name	No. of Hours	Hourly Rate	Gross
1	Greenbrier	Andrew		\$6.00	
2	Zook	Dori			
3	Andrews	Kaaren			
4	Norris	Joe			
15	Larkin	Mike			
16		Kate			
	McDonald	Heather			

Continue entering Hourly Rate and Withholding Allowances information for the rest of your employees.

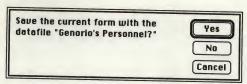
File is not intended to be a specialized payroll software package and doesn't allow conditional statements like: "If employee type = salaried, then...." What this means is that all employees have to be treated similarly when we have File do our calculations. For instance, the formula for gross pay (No. of Hours \* Hourly Rate) must apply to all records in the datafile. So, you need to calculate an hourly rate for employees who are salaried rather than hourly. To do this, take the annual salary and divide it by 2080 (52 weeks multiplied by 40 hours per week), and use that figure for the hourly rate. Because this figure doesn't change from month to month, you only have to enter it once in the Payroll Skeleton datafile and then copy the Payroll Skeleton from month to month, not enter it each month as you do for hourly employees.

When you've finished entering hourly rates and withholding allowances for each employee, you're ready to duplicate the file, since it contains all the information that won't change from month to month. To do this, you have to quit File and go to the Macintosh desktop so you can use the Duplicate command. You might think it would be easier to use the Save Records As... command from the File menu. But File won't save the formulas in the computed fields if you do this; it will only save the current values contained in them.

To duplicate the file:

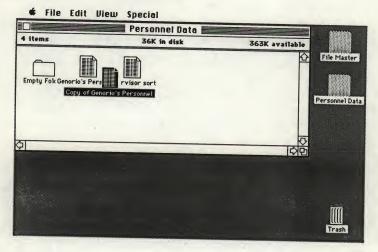
□ Quit File by choosing Quit from the File menu.

You'll see a dialog box asking if you want to save the current form (view 2) with your personnel datafile.



- □ Click the Yes button.
- On the Macintosh desktop, double-click on the Personnel Data disk icon to open its window.
- □ Click on the personnel (in our example, Genorio's Personnel) datafile icon to select it, then choose Duplicate from the File menu.

A duplicate file named Copy of Genorio's Personnel (or whatever your personnel file is called) will appear in the window.



☐ Type *Payroll Skeleton* as the name of the duplicate file and press Return.

You may then want to eject your data disk, put in another blank disk and drag your Payroll Skeleton datafile icon onto it to make a backup copy in case some-

thing happens to your original.

Then eject the skeleton archive disk, and put your Personnel Data disk back in. Each month, or whenever it's time to start a new datafile, all you have to do is duplicate the skeleton file on the Macintosh desktop, rename it for the current pay period, then double-click on the copy to open it and enter your payroll information.

### **Adding Payroll Data**

Now is a good time to add some employee payroll information to the current period's datafile. That way, you can see the computed fields actually work and, when you design reports later in this chapter, you'll be able to see what an actual report looks like.

Enter information for your own employees or use the Genorios' data in the following list. Enter payroll information the same way you entered personnel information. Use the Return key to move to the next field. To move to the previous field, use Shift and Return.

Begin with the Date field of the first record.

- □ Scroll to the top of the datafile so that the first record is visible.
- □ Click an insertion point in the Date field of the first record.
- □ Hold down the Command key and press the hyphen key to enter today's date automatically from the system calendar.

	October Payroll '85								
	Date	Last Name	First Name	No. of Hours	Hourly				
1	10/31/85	Greenbrier	Andrew						
2		Zook	Dori						
3		Andrews	Kaaren						
4		Norris	Joe						
_					_				
+		Larkin	Mike						
		Davis	Kate						
15									

If you want a date other than today's date, type in the date of your choice instead of using the Command-hyphen option.

Press the Return key three times to move past the Last Name and First Name fields to the No. of Hours field. Enter the number of hours worked in this pay period for the first employee and press Return.

*	File	Edit	Form	0	rgai	nize
	100				-	

	Last Name	First Name	No. of Hours	Hourly Rate	Gross
1	Greenbrier	Andrew	160	\$6.00	\$0
2	Zook	Dori		\$6.25	73
3	Andrews	Kaaren		\$4.85	
4	Norris	Joe		\$4.60	

| 15 Larkin | Mike | \$6.40 | 16 Davis | Kate | \$5.90 | 17 McOnnald | Healther | \$6.00 | ひ 20/20公 |

Note that the Hourly Rate field is now highlighted. Since you've already typed something into this field, File highlights the field instead of putting the insertion point in it. If you wanted to change the information in it, you would simply start typing and File would erase the previous contents and replace it with what you type. In this case, however, the information you want is already there.

□ Press the Return key twice.

**■ File Edit Form Organize** 

October Payroll '85								
	Hourly Rate	Gross Pay	holding Allow	Withholding	FICK			
1	\$6.00	\$960.00	3		6			
2	\$6.25	\$0.00	2		*			
3	\$4.85	\$0.00	1					
4	\$4.60	\$0.00	1					
7		22						
15	\$6.40	\$0.00			_			
16	\$5.90		3					
17	\$5.90	\$0.00	4					
20/2	2012				99999999			

File moves the insertion point to the Withholding field. Note that File has calculated the gross pay for the first employee and the result is displayed in the Gross Pay field.

The amount you enter in the Withholding field comes from the withholding table in the government publication Circular E.

☐ Locate the appropriate withholding amount in the tax table and enter this amount in the Withholding field.

Remember, don't type dollar signs in this field; the field is already formatted for dollar display.

□ Press Return.

File calculates FICA, total FICA, and net pay, and moves the insertion point to the Date field of the next employee record. It's a lot nicer to let File do the work than to do all these calculations yourself, even with a calculator. If you want to, you can scroll right to see the result of the calculations.

	ile Edit For							
October Payroll '85								
	FICA	FICA Total	otal Deduction	Net Pay	<u></u>			
1	\$67.68	\$135.36	\$131.28	\$828.72				
2	\$0.00	\$0.00	\$0.00	\$0.00				
3	\$0.00	\$0.00	\$0.00	\$0.00				
4	\$0.00	\$0.00	\$0.00	\$0.00				
-		E			~			
			-	- AND -	-			
15	\$0.00	\$0.00	\$0.00	\$0.00				
16	\$0.00	\$0.00	\$0.00	\$0.00				
17	\$0.00	\$0.00	\$0.00	\$0.00				
20/20	)(A)				<b>1</b>			

Continue entering payroll information for the rest of your employees or for the Genorios' employees in the following list. If the information you're entering is the same as the information in the same field of the previous record—for example, if employee 7 has worked 160 hours and so has employee 8—remember that you can use one of File's shortcuts. Hold down the Command key and press the apostrophe key and File will duplicate information from the field above.

## **Creating a Payroll Master**

Next you need to create a payroll master datafile. A payroll master datafile is a place to store payroll information for an entire year. Each month when you finish entering payroll information, you can copy information for the current month into the payroll master datafile and have a cumulative record of all payroll activities for the year.

It's a good idea to keep this master datafile on a separate disk. That way, if anything happens to the disk containing your monthly records, you'll have a copy of that information on a separate disk in your payroll master file.

You can make the payroll master datafile by first quitting File and then making another copy of your payroll datafile on the Macintosh Desktop. (We'll use the name Payroll Master for this copy.) Then restart File and load the Payroll Master file and delete the Withholding Allowances field and all the personnel fields, such as Address, Hire Date, Site, and Shift Preference. These fields don't change from month to month and they don't contain payroll information, so there is no need to keep them in the Payroll Master. And without them, the Payroll Master will be smaller, so information from more months will fit on a single disk.

To make a copy of your personnel datafile, you first need to leave File.

□ Choose Quit from the File menu.

If you've made changes to one of the forms, you'll see a dialog box that asks if you want to save the changes you've made to the current form.

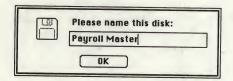
Save the current form with the datafile "October Payroll '85?"	Yes
-	Cancel

Remember, File saves two forms with each datafile.

□ Click the Yes button to save the personnel form (view 1) and the payroll form (view 2) with your payroll datafile.

Now you'll see the Macintosh desktop. What you want to do is eject the Personnel Data disk, insert a new disk for your Payroll Master datafile, and copy your payroll datafile to the new disk.

- □ Double-click on the Personnel Data disk icon to open its window.
- □ Choose Eject from the File menu.
- ☐ Insert your new disk.
- ☐ If the disk hasn't been initialized and named, do this now by responding to the Mac's prompts. Name your disk with a descriptive title (such as Payroll Master).



□ Press Return.

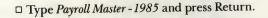
If you need to rename an already formatted disk, simply select the old name, type the new name, then press Return.

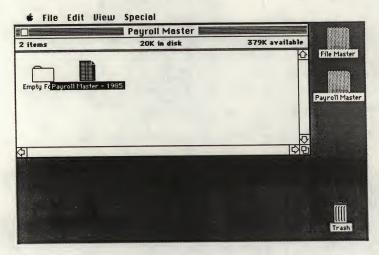
□ Drag the payroll datafile icon (in our example, October Payroll '85) from the Personnel Data disk window onto the Payroll Master disk icon. When the Payroll Master disk icon turns black, release the mouse button and the Mac will copy October Payroll '85 from your Personnel Data disk to your Payroll Master disk.

You'll see instructions on the screen for swapping disks; follow them and in a short while, you'll have your personnel datafile on your Payroll Master disk.

The next step is to rename the October Payroll '85 file on the new disk. We want to name it Payroll Master -1985.

- □ Double-click on the Payroll Master icon to open its window.
- □ Select the October Payroll '85 icon on the new disk.





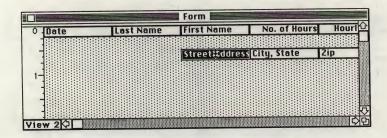
Now you're ready to load the datafile named Payroll Master - 1985 so you can delete the fields you don't need.

□ Double-click on the Payroll Master - 1985 icon.

File loads this datafile and the File program.

To delete the fields you don't need in your Payroll Master datafile, open the form window, select the personnel fields, and then press the Backspace key. Select fields the same way you did earlier when you selected the personnel fields to move into the hide area while constructing the payroll form.

- □ Choose Show Form from the Form menu.
- □ If the personnel form (view 1) is showing, click in the View 1 box to change to your payroll form (view 2).
- □ Click in the Street Address field to select it.



□ Hold down the Shift key and click in each of the following fields:

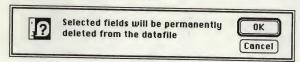
City, State
Zip
Phone
Birthdate
Phone
Emergency Contact
Withholding Allowances
Hire Date
Site
Job Title

Management Skill Level
Birthdate
Emergency Contact
Emergency Phone
Shift Preference
Weekends
Status

Comments

□ Press the Backspace key to delete these fields.

You'll see a dialog box that asks you to confirm the deletion of these fields.



□ Click the OK button and relax.

Supervisor

Remember, you have these fields in your original personnel datafile. You're only deleting them from your Payroll Master datafile, which is a copy of your first month's payroll datafile.

That's all there is to setting up a Payroll Master datafile. Later in this chapter, you'll learn how to copy each month's payroll data into the Payroll Master datafile. You'll also learn how to use the Payroll Master datafile to generate payroll reports, the next step in this payroll system.

### **Creating Payroll Reports**

Next we'll set up and print two reports: a payroll summary by month and a payroll summary by employee. Setting up reports allows you to use information in your datafiles in different ways. You can arrange the fields in any order. But you can also have File produce subtotals and totals for fields in your datafile to get information you could not get with an additional form.

The payroll summary by month looks like the printout in Figure 4-3. It contains all the information you need for quarterly FICA and withholding reporting, and would look like the report shown in Figure 4-4 if you used File's summary report feature. File's report capabilities added the totals.

The payroll summary by employee looks like the printout in Figure 4-5. The payroll summary report by employee will be especially useful for end-of-year W2 forms, as shown in Figure 4-6, because it computes a total of each employee's wages and deductions for the entire year. When it's time to complete W2 forms for your employees, all you'll need to do is copy in the totals manually on the W2 forms. File's report capabilities compute the subtotals and the totals by employee. (Figures 4-3, 4-4, 4-5, and 4-6 follow on the next five pages.)

Figure 4-3. A payroll summary report by month for Genorio's Deli

Date	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay
Oct 31, 1985	Allendorfer	Barbara	130	\$6.00	\$780.00
	Andrews	Kaaren	144	\$4.85	\$698.40
	Beaman	Jason	150	\$6.25	\$937.50
	Brooks	Karen	80	\$6.25	\$500.00
	Bruce	Jack	160	\$6.25	\$1,000.00
	Davis	Kate	137	\$5.90	\$808.30
	Genorio	Angela	160	\$15.33	\$2,452.80
		Victor	160	\$15.62	\$2,499.20
	Greenbrier	Andrew	160	\$6.00	\$960.00
	Hazelton	Suzanne	155	\$7.20	\$1,116.00
	Justice	Francis	160	\$5.90	\$944.00
	Larkin	Mike	115	\$6.40	\$736.00
	Lei	Tiffeny	160	\$6.25	\$1,000.00
	McDonald	Heather	85	\$6.00	\$510.00
	McFadden	Sheila	160	\$11.46	\$1,833.60
	Norris	Joe	140	\$4.60	\$644.00
	Oliver	Hardy	160	\$6.65	\$1,064.00
	Salieri	Sharon	160	\$10.94	\$1,750.40
	Spencer	Tracy	160	\$6.75	\$1,080.00
	Zook	Dort	90	\$6.25	\$562.50
			Total for	Oct 31, 1985:	\$21,876.70
				Total	\$21,876,70

Withholding	FICA	FICA Total	otal Deduction	Net Pay
\$80.30	\$54.99	\$109.98	\$135.29	\$644.71
\$68.30	\$49.24	\$98.47	\$117.54	\$580.86
\$68.80	\$66.09	\$132.19	\$134.89	\$802.61
\$7.20	\$35.25	\$70.50	\$42.45	\$457.55
\$122.10	\$70.50	\$141.00	\$192.60	\$807.40
\$48.80	\$56.99	\$113.97	\$105.79	\$702.51
\$250.60	\$172.92	\$345.84	\$423.52	\$2,029.28
\$259.40	\$176.19	\$352.39	\$435.59	\$2,063.61
\$63.60	\$67.68	\$135.36	\$131.28	\$828.72
\$105.60	\$78.68	\$157.36	\$184.28	\$931.72
\$68.80	\$66.55	\$133.10	\$135.35	\$808.65
\$49.30	\$51.89	\$103.78	\$101.19	\$634.81
\$106.20	\$70.50	\$141.00	\$176.70	\$823.30
\$39.80	\$35.96	\$71.91	\$75.76	\$434.25
\$202.90	\$129.27	\$258.54	\$332.17	\$1,501.43
\$62.30	\$45.40	\$90.80	\$107.70	\$536.30
\$53.20	\$75.01	\$150.02	\$128.21	\$935.79
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$24.40	\$39.66	\$79.31	\$64.06	\$498.44
			\$3,490.51	\$18,386.19
\$1,948.20	\$1,542.31	\$3,084.61	\$5,490.51	\$10,300.19
\$1,948.20	\$1,542.31	\$3,084.61	\$3,490.51	\$18,386.19

Figure 4-4. A payroll summary report by month with the necessary FICA and withholding information

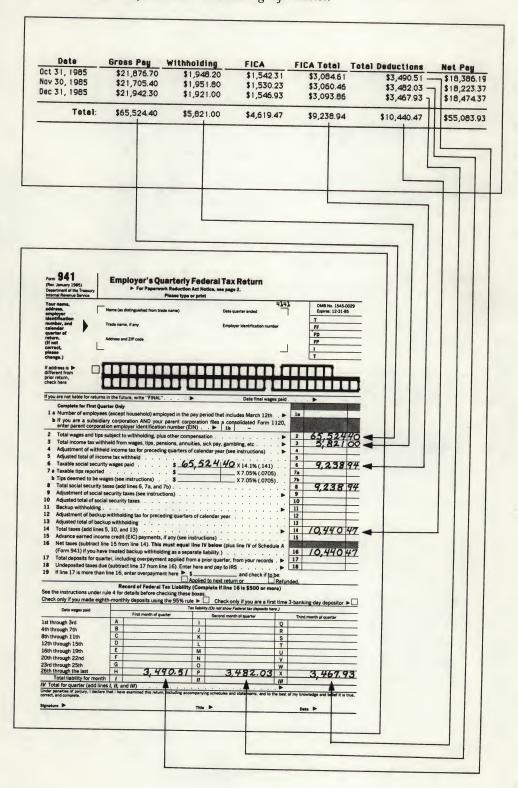


Figure 4-5. Part of a payroll summary report by employee for Genorio's Deli

Last Name	First Name	Date	No. of Hours	Hourly Rate	Gross Pay
Allendorfer	Barbara	Oct 31, 1985	130	\$6.00	\$780.00
Allendorter	Dai nai a	Nov 30, 1985	100	\$6.00	\$600.00
		Dec 31, 1985	112	\$6.00	\$672.00
		500 51, 1505	Total fo	r Allendorfer:	\$2,052.00
	W	Oct 31, 1985	144	\$4.85	\$698.40
Andrews	Kaaren	Nov 30, 1985	140	\$4.85	\$679.00
		Dec 31, 1985	139	\$4.85	\$674.15
		Dec 31, 1903		for Andrews:	\$2,051.55
		Oct 31, 1985	150	\$6.25	\$937.50
Beaman	Jason	Nov 30, 1985	148	\$6.25	\$925.00
		Dec 31, 1985	155	\$6.25	\$968.75
		Dec 31, 1903	Tot	al for Beaman:	\$2,831.25
	Manan	Oct 31, 1985	80	\$6.25	\$500.00
Brooks	Karen	Nov 30, 1985	90	\$6.25	\$562.50
		Dec 31, 1985	88		\$550.00
		Dec 31, 1903		tal for Brooks:	\$1,612.50
4	Jack	Oct 31, 1985	160	\$6.25	\$1,000.00
Bruce	Jack	Nov 30, 1985	160	\$6.25	\$1,000.00
		Dec 31, 1985	160	\$6.25	\$1,000.00
		500 51, 1500	Т	otal for Bruce:	\$3,000.0
Davida	Kate	Oct 31, 1985	137	\$5.90	\$808.3
Davis	Vare	Nov 30, 1985	144	\$5.90	\$849.6

Lant Mama	First Name	Date	No. of Hours	Hourly Rate	Gross Pay
Last Name	111301101110		To	tal for Oliver:	\$3,192.00
	Peter	Dec 31, 1985	87	\$5.00	\$435.00
Parker	Peter	, , , , , , , , , , , , , , , , , , , ,	Tot	al for Parker:	\$435.00
	Sheron	Oct 31, 1985	160	\$10.94	\$1,750.40
Salieri	Stigton	Nov 30, 1985	160	\$10.94	\$1,750.40
		Dec 31, 1985	160	\$10.94	\$1,750.40
		50001, 1500	Tot	al for Salieri:	\$5,251.20
	Tanau	Oct 31, 1985	160	\$6.75	\$1,080.00
Spencer	Tracy	Nov 30, 1985	160	\$6.75	\$1,080.00
		Dec 31, 1985	160	\$6.75	\$1,080.00
			Total	ol for Spencer:	\$3,240.00
was also	Dori	Oct 31, 1985	90	\$6.25	\$562.50
Zook	DOLL	Nov 30, 1985	78	\$6.25	\$487.50
		Dec 31, 1985	80	\$6.25	\$500.00
		555 5 1, 1555		Total for Zook:	\$1,550.0
				Total:	\$65,524.4

\$54.99 \$42.30 \$47.38 \$144.67	\$109.98 \$84.60 \$94.75 \$289.33	\$135.29 \$98.60 \$109.68	\$644.71 \$501.40 \$562.32
\$47.38 \$144.67	\$94.75	\$98.60 \$109.68	\$501.40
\$144.67		\$109.68	
	\$289.33		
*40.04		\$343.57	\$1,708.43
\$49.24	\$98.47	\$117.54	\$580.86
\$47.87			\$568.83
\$47.53	\$95.06		\$564.32
\$144.63	\$289.27	\$337.53	\$1,714.02
\$66.09	\$132.19	\$134.00	\$802.61
\$65.21			
\$68.30	\$136.59		\$790.99 \$826.15
\$199.60	\$399.21	\$411.50	\$2,419.75
\$35.25	\$70.50	\$42.45	\$457.55
\$39.66	\$79.31		\$508.44
\$38.78	\$77.55		\$499.23
\$113.68	\$227.36	\$147.28	\$1,465.22
\$70.50	\$141.00	\$192.60	\$807.40
\$70.50	\$141.00		\$807.40
\$70.50	\$141.00		\$807.40
\$211.50	\$423.00	\$577.80	\$2,422.20
\$56.99	\$1,13,97	\$105.79	\$702.51
\$59.90	\$119.79	\$114.70	\$734.90
	\$47.53 \$144.63 \$66.09 \$65.21 \$68.30 \$199.60 \$35.25 \$39.66 \$38.78 \$113.68 \$70.50 \$70.50 \$211.50	\$47.53 \$95.06 \$144.63 \$289.27 \$66.09 \$132.19 \$65.21 \$130.43 \$66.30 \$136.59 \$199.60 \$399.21 \$35.25 \$70.50 \$39.66 \$79.31 \$38.78 \$77.55 \$113.68 \$227.36 \$70.50 \$141.00 \$70.50 \$141.00 \$70.50 \$141.00 \$70.50 \$141.00 \$70.50 \$141.00 \$70.50 \$141.00	\$47.87 \$95.74 \$110.17 \$47.53 \$95.06 \$109.63 \$144.63 \$289.27 \$337.53 \$66.09 \$132.19 \$134.89 \$65.21 \$130.43 \$134.01 \$66.30 \$136.59 \$142.60 \$199.60 \$399.21 \$411.50 \$35.25 \$70.50 \$42.45 \$39.66 \$79.31 \$54.06 \$38.78 \$77.55 \$50.78 \$113.68 \$227.36 \$147.28 \$70.50 \$141.00 \$192.60 \$70.50 \$141.00 \$192.60

Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$159.60	\$225.04	\$450.07	\$384.64	\$2,807.36
\$27.80	\$30.67	\$61.34	\$58.47	\$376.53
\$27.80	\$30.67	\$61:34	\$58.47	\$376.53
\$161.00 \$161.00	\$123.40 \$123.40	\$246.81 \$246.81	\$284.40 \$284.40	\$1,466.00
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00 \$1,466.00
\$483.00	\$370.21	\$740.42	\$853.21	\$4,397.99
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$105.60 \$105.60	\$76.14 \$76.14	\$152.28 \$152.28	\$181.74 \$181.74	\$898.26 \$898.26
\$316.80	\$228.42	\$456.84	\$545.22	\$2,694.78
\$24.40	\$39.66	\$79.31	\$64.06	\$498.44
\$14.80 \$17.20	\$34.37 \$35.25	\$68.74 \$70.50	\$49.17 \$52.45	\$438.33
\$56.40	\$109.28	\$218.55	\$165.68	\$447.55
\$5,821.00	\$4,619.47	\$9,238.94	\$10,440.47	\$55,083.93

Figure 4-6. A payroll summary report with the necessary FICA and withholding information

	Etech Mar		Date	No. of Hours	Hourly	Rate (	ross Pay	
Last Name	First Na		n 31, 1985	65		\$6.25	\$406.25	
Brooks	Karen		ab 28, 1985	74		\$6.25	\$462.50	
			ar 31, 1985	80		\$6.25	\$500.00	
			pr 30, 1985	80		\$6.25	\$500.00	
				77		\$6.25	\$481.25	
			ay 31, 1985	80		\$6.25	\$500.00	
			un 30, 1985 ul 31, 1985	80		\$6.25	\$500.00	
				80		\$6.25	\$500.00	
			ug 31, 1985	75		\$6.25	\$468.75	
			ep 30, 1985	80		\$6.25	\$500.00	
			ct 31, 1985	80		\$6.25	\$500.00	
			lov 30, 1985	80		\$6.25	\$500.00	
		U	ec 31, 1985		tal for I	-	\$5,818.75	
							\$5,818.75	
						Total:	\$5,010.73	
						_		
	~				_			~
				continued				
Withholding	FICA		FICA Total	Total Deduct		Net Pay	<del>-</del>	
Withholding \$0.00		28.64	\$57.28	\$2	8.64	\$377.6		
\$0.00	5		\$57.28 \$65.2	\$ \$2 1 \$3	85.01	\$377.6 \$427.4	9	
\$0.00 \$2.40	0 9	28.64	\$57.28 \$65.2 \$70.50	\$2 1 \$3 5 \$4	28.64 35.01 42.45	\$377.6 \$427.4 \$457.5	9 5	
\$0.00 \$2.40 \$7.20	0 1	28.64 32.61	\$57.28 \$65.2 \$70.50 \$70.50	\$2 1 \$3 0 \$4	28.64 35.01 42.45 42.45	\$377.6 \$427.4 \$457.5 \$457.5	9 5 5	
\$0.00 \$2.40 \$7.20 \$7.20	0 10	28.64 32.61 35.25	\$57.28 \$65.2 \$70.56 \$70.56	\$ \$2 1 \$3 0 \$4 0 \$4 5 \$3	28.64 35.01 42.45 42.45 38.73	\$377.6 \$427.4 \$457.5 \$457.5 \$442.5	9 5 5 2	
\$0.00 \$2.40 \$7.20 \$7.20 \$4.80	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28.64 32.61 35.25 35.25	\$57.26 \$65.2 \$70.56 \$70.5 \$67.8 \$70.5	\$ \$2 5 \$3 5 \$4 5 \$5 5 \$5 5 \$5	28.64 35.01 42.45 42.45 38.73 42.45	\$377.6 \$427.4 \$457.5 \$457.5 \$442.5 \$457.5	9 5 5 2 2	
\$0.00 \$2.40 \$7.20 \$7.20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28.64 32.61 35.25 35.25 33.93	\$57.26 \$65.2 \$70.5 \$70.5 \$67.8 \$70.5 \$70.5	5 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2	28.64 35.01 42.45 42.45 38.73 42.45 42.45	\$377.6 \$427.4 \$457.5 \$457.5 \$442.5 \$457.5 \$457.5	9 5 5 5 2 5 5 5 5	
\$0.00 \$2.40 \$7.20 \$7.20 \$4.80 \$7.20 \$7.20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28.64 32.61 35.25 35.25 33.93 35.25	\$57.26 \$65.2 \$70.5 \$70.5 \$67.8 \$70.5 \$70.5	\$ \$2 1 \$3 5 \$5 5 \$5 5 \$5 0 \$8 0 \$8	28.64 35.01 42.45 42.45 38.73 42.45 42.45 42.45	\$377.6 \$427.4 \$457.5 \$457.5 \$442.5 \$457.5 \$457.5 \$457.5	9 5 5 2 2 5 5 5 5	
\$0.00 \$2.40 \$7.20 \$7.20 \$4.80 \$7.20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28.64 32.61 35.25 35.25 33.93 35.25 335.25	\$57.26 \$65.2 \$70.5 \$70.5 \$67.8 \$70.5 \$70.5 \$70.5	\$ \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2	28.64 35.01 42.45 42.45 58.73 42.45 42.45 42.45 42.45	\$37.6 \$427.4 \$457.5 \$457.5 \$442.5 \$457.5 \$457.5 \$457.5	9 5 5 2 2 5 5 5 5 5 5 6 5	
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\$0.00 \$2.40 \$7.20 \$4.80 \$7.20 \$7.20 \$7.21 \$7.22 \$2.4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$28.64 \$32.61 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25	\$57.26 \$65.2 \$70.56 \$67.8 \$67.8 \$70.5 \$70.5 \$70.5 \$66.0 \$70.5	\$ \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2	28.64 35.01 42.45 42.45 38.73 42.45 42.45 42.45 42.45 42.45 42.45	\$377.6 \$427.4 \$457.5 \$457.5 \$442.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5	9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
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\$0,00 \$2,44 \$7,20 \$4,86 \$7,20 \$7,20 \$7,20 \$7,20 \$7,20 \$7,20 \$7,20 \$67,2	000000000000000000000000000000000000000	\$28.64 \$32.61 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25 \$35.25	\$57.26 \$65.2 \$70.55 \$70.5 \$70.5 \$70.5 \$70.5 \$70.5 \$70.5 \$70.5 \$70.5	\$ \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2	28.64 55.01 42.45 42.45 58.73 42.45 42.45 42.45 42.45 42.45 42.45 42.45	\$377.6 \$427.4 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5 \$457.5	9 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
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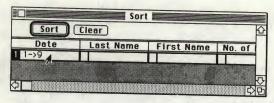
					ON	MB No. 1545-00	08		
1 Control num	ber	4 8	Employer's Sta	te number		ORM 1983			x Statemen
2 Employer's	name, address, and ZIP co	de	Dep	artment	3 Employer	's identification num	nber Copy	D for emplo	oyer
			Co.	Corp	5 Stat em	De- ceased	Legal 942 rep. em	Sub- p. total	Void
			File	Number	6 Allocat	ed tips	7 Adv	vance EIC payr	ment
8 Employee's	social security number	9 Federal incon	ne tax withhel	0	10 Wage	s, tips, other co	mpensation 8.75	11 Social s	ecurity tax withhel
12 Employee					13 Socia	1 security wage	18.75	14 Social s	ecurity tips
P	Karen Br	rooks			16 State	unemp/dis w/h			
					17 State	ncome tax	18 State wa	iges, tips, etc.	19 Name of State
					20 Local	Income tax	21 Local w	ages, tips, etc.	22 Name of localit

We'll create these reports and save them separately. Then each month when you want to print the reports, open the report window and choose the Open Report... command from the File menu, specify which report you'll be using, and print it.

#### Report by Month

To create the monthly summary report, you first need to sort the records so they're in the order you want them in the report. In the sample monthly report for Genorio's Deli, we'll first sort by date in ascending order (January through December), and then by last name so each month's employees are listed alphabetically. If another sorting order makes more sense for your needs, choose the way that works best for you. You can try several different sorts, and then make a report with the one that is best. If you later change your mind, you can follow these steps and easily make a different report.

- □ Click anywhere in the datafile window to close the form window.
- □ Choose the Sort... command from the Organize menu.
- □ Click the Clear button to remove previous sort criteria.
- ☐ In the sort window, click in the Date field.



The field is divided into two boxes, with a 1 in the smaller box to the left. This indicates Date is your primary sort. The 1->9 in the larger box to the right tells you the dates will be sorted in ascending order. (Sorting by date won't help you in the first month you use this system, but after you've entered information for more than one month, sorting in ascending order by date will put the records for the most recent month at the top of the datafile window.)

□ Click in the Last Name field.



The 2 in the small box at the left side of the field indicates this is your secondary sort. The A->Z in the larger box to the right indicates records will be sorted alphabetically in ascending order.

□ Click the Sort button to have File sort the records.

The records are now displayed in the datafile window sorted by both Date and Last Name.

		Payroll	Master - 1985		
	Date	Last Name	First Name	No. of Hours	Hourly û
1	Oct 31, 1985	Allendorfer	Barbara	130	
2	Oct 31, 1985	Andrews	Kaaren	144	
3	Oct 31, 1985	Beaman	Jason	150	
4	Oct 31, 1985	Brooks	Karen	80	
5	Oct 31, 1985	Bruce	Jack	160	
<del>6</del>	Oct 31, 1985	Davis	Kate	137	
7	Oct 31, 1985	Genorio	Angela	160	\$
					_
15	Oct 31 1985	Oliver	Hardu	160	000809899999

□ Now choose Report... from the Organize menu.

The report window opens. Notice that Date and Last Name are in the Sort area to the left of the double vertical line. This indicates that they will be sorted on the report. The remaining fields are to the right of the double vertical line in the Not Sorted area.

Now you want to tell File what kinds of subtotals and totals you want in your report. Because you sorted by Date and by Last Name, both of those categories appear in the Sort column on the left. This means that you can create a report with totals for any of your fields by Date or by Last Name.

In your payroll report by month, you want subtotals for each of the pay and deduction fields by date—that is, monthly totals for Gross Pay, FICA, FICA Total, Withholding, Total Deductions, and Net Pay. To get this information in your report:

□ Scroll the report window to the right until the Gross Pay column is visible.

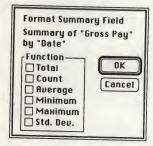
Preview Summary Report							
Sort Heading	Hourly Rate	Gross Pay	Withholding	FICA			
Field	Hourly Rate	Gross Pay	Withholding	FICA			
by Last Na							
by Date							
Grand	1						

Note the dashed vertical line between the Hourly Rate and Gross Pay columns. When you print the report, this is where File will break the page, making the Gross Pay information the first column on the second page.

 $\hfill\Box$  Double-click in the box at the intersection of the Gross Pay column and the By Date row.

Previeu Sort	Summary			
Heading	Hourly Rate	Gross Pay	Withholding	FICA
Field	Hourly Rate	Gross Pay	Withholding	FICA
by Last Nai		-3	- Cremoraling	FILH
by Date		4		
Grand		7		

Instead of double-clicking, you could click in the box, then choose the Format Summary Field... command from the Form menu. But double-clicking is quicker. Either way, you'll see the Format Summary Field dialog box.



□ Click on the Total box and then click OK.

Sort	Summary :			
Heading	Hourly Rate i	Gross Pay	Withholding	FICA
Field	Hourly Rate	Gross Pay	Withholding	FICA
by Last Nai				FICH
by Date		otal		
Grand				
			11111111111111111111111111111	1.

Notice that the word Total appears in that box.

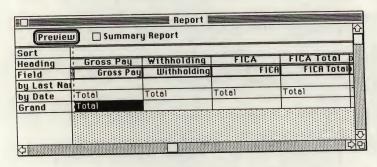
Follow these same steps to get totals in the Withholding, FICA, FICA Total, Total Deductions, and Net Pay columns.

Your report window should now look like this:

Preview	Summary	J Report		
Sort Heading	FICA	FICA Total	ptal Deduction	Net Pay
Field	FICA	FICA Tota	tal Deductions	Net Pay
by Last Na				Total
by Date	Total	Total	Total	Tutai
Grand		1		

In addition to monthly totals, we'd also like to see grand totals for the year to date, for each of these fields. To get grand totals:

- □ Scroll the report window to the left until the Gross Pay column is visible.
- □ Double-click in the Gross Pay column in the Grand row.
- □ Click in the Total box and then click OK.



□ Follow these steps to get grand totals for Withholding, FICA, FICA Total, Total Deductions, and Net Pay by clicking in the Grand row under each of these headings.

Sort				W-1 D-11
Heading	FICA	FICA Total	ptal Deduction	Net Pay Net Pay
Field	FIC	A FICA Tota	tal Deductions	Net Pay
by Last Na				Total
by Date	Total	Total	1000	
Grand	Total	Total	Total	Total

The last step is to make the Total Deductions column wide enough so the entire heading can be seen on the printed report. To do this:

- □ Position the mouse pointer on the right side of the Total Deductions box in the Heading row.
- □ When the mouse pointer looks like this:

Sort		mary Report			
Heading	FICA	FICA TO	tal htal Dodu	ctip Net Pa	
Field		FICAL FICA	Total tal Deduc		
by Date		1	otal tal begge	Net	Pay
by First Na					
by Last Nai	Total	Total	Total	7.1.1	
Grand	Total	Total	Total	Total Total	
			000000000000000000000000000000000000000	1000	Pointe

hold down the mouse button and drag the right side of the box to the right about a quarter of an inch and release the mouse button.

	ICA FICAT	otal Total Dedu	ctions Net Pau
Field	FICA FICE	Total Total Dedu	ictions Net Pay
by Last Nat		Total Degi	retions Net
by Date   Total	Total	Total	Total
Grand Total	Total	Total	Total
			110181

Now you'll be able to see the entire heading on the report.

You've finished designing your monthly report. The Preview button in the report window lets you look at a report on your screen before you print it. This is an especially useful feature: If the report is not what you want, you can make changes without wasting paper and printing time.

☐ To see what your monthly report looks like, click the Preview button.

Your report should look something like the printout in Figure 4-7.

 $\hfill\Box$  Click Done when you're done previewing your report.

Figure 4-7. A monthly summary payroll report for Genorio's Deli

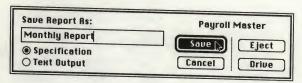
	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay		
Date		Barbara	100	\$6.00	\$600.00		
Nov 30, 1985	Allendorfer	Kaaren	140	\$4.85	\$679.00		
	Andrews	Jason	148	\$6.25	\$925.00		
	Beaman	Karen	90	\$6.25	\$562.50		
	Brooks		160	\$6.25	\$1,000.00		
	Bruce	Jack	144	\$5.90	\$849.60		
	Davis	Kate	160	\$15.33	\$2,452.80		
	Genorio Greenbrier Hazelton	Angela	160	\$15.62	\$2,499.20		
		Victor	160	\$6.00	\$960.00		
		Hazelton Suz	Andrew	130	\$7.20	\$936.00	
			Suzanne	160	\$5.90	\$944.00	
	Justice	Francis	150		\$960.0		
	Larkin	Tiffeny Heather	Tiffeny	Mike	160		\$1,000.00
	Lei			85		\$510.0	
	McDonald		160		\$1,833.6		
	McFadden	Sheila	133		\$611.8		
	Norris	J08	160		\$1,064.0		
	Oliver	Hardy	90		\$450.0		
	Parker	Peter	160		\$1,750.4		
	Salieri	Sheron	160		\$1,080.0		
	Spencer	Tracy		Nov 30, 1985:	\$21,667.9		
				Total:	\$21,667.9		

	FICA	FICA Total	Total Deductions	Net Pay
Withholding	\$42.30	\$84.60	\$98.60	\$501.40
\$56.30		\$95.74	\$110.17	\$568.83
\$62.30	\$47.87	\$130.43	\$134.01	\$790.99
\$68.80	\$65.21	\$79.31	\$54.06	\$508.44
\$14.40	\$39.66	•	\$192.60	\$807.40
\$122.10	\$70.50	\$141.00	\$114.70	\$734.90
\$54.80	\$59.90	\$119.79	\$423.52	\$2,029.28
\$250.60	\$172.92	\$345.84	\$435.59	\$2,063.61
\$259.40	\$176.19	\$352.39		\$828.72
\$63.60	\$67.68	\$135.36	\$131.28	\$764.41
\$105.60	\$65.99	\$131.98	\$171.59	
\$68.80	\$66.55	\$133.10	\$135.35	\$808.65
\$85.30	\$67.68	\$135.36		\$807.02
\$106.20	\$70.50	\$141.00	\$176.70	\$823.30
\$39.80	\$35.96	\$71.91	\$75.76	\$434.25
\$202.90	\$129.27	\$258.54	\$332.17	\$1,501.4
	\$43.13	\$86.26		\$512.3
\$56.30	\$75.01	\$150.02		\$935.79
\$53.20		\$63.45		\$387.4
\$30.80	\$31.73	\$246.81	A	\$1,466.0
\$161.00	\$123.40			\$898.2
\$105.60	\$76.14			\$18,172.5
\$1,967.80	\$1,527.59	\$3,055.17	\$3,495.59	\$10,172.5
\$1,967.80	\$1,527.59	\$3,055.17	\$3,495.39	\$18,172.5

This first month's summary report is nice, but when you get several months of data all totaled by month, with grand totals at the end, it becomes more impressive each month. And at the end of the quarter, when you're filling out your FICA and withholding reports, all the information you'll need will be right in this report, as shown in the printout in Figure 4-8 on the next two pages. If you want to see only totals, as shown in Figure 4-4, click Summary Report, then Preview, widen the page margins, and print it horizontally.

To save this report:

- $\hfill\Box$  Choose Save Report As... from the File menu.
- ☐ Type *Monthly Report* or some other descriptive name for this report and click the Save button.



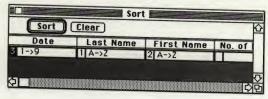
Now Monthly Report is saved on your Payroll Master disk, ready for you to open and use each month.

#### Report by Employee

To create a monthly report by employee, the steps are similar to the steps for creating the monthly summary report.

- $\hfill\Box$  Choose the Sort... command from the Organize menu.
- Click the Clear button in the sort window to remove former sort criteria.
- $\square$  Sort the datafile, with Last Name as your first sort (in A -> Z order), First Name as the second sort (in A -> Z order), and Date the third sort (in 1->9 order).

This will alphabetize subtotals by employee, and records for each employee will be sorted in ascending order by date in our report.



- □ Click the Sort button.
- □ Open the report window if you closed it earlier.
- □ Choose New Report from the File menu to reset the report window from the last report criteria to the sort criteria you just specified.

Figure 4-8. Part of an end-of-quarter payroll summary report

	Lock Name	First Name	No. of Hours	Hourly Rate	Gross Pay
Date	Last Name	Barbara	130	\$6.00	\$780.00
Oct 31, 1985	Allendorfer		144	\$4.85	\$698.40
	Andrews	Kaaren Jason	150	\$6.25	\$937.50
	Beaman		80	\$6.25	\$500.00
	Brooks	Karen	160	\$6.25	\$1,000.00
	Bruce	Jack	137	\$5.90	\$808.30
	Davis	Kate	160	\$15.33	\$2,452.80
	Genorio	Angela	160	\$15.62	\$2,499.20
	Victor		160	\$6.00	\$960.00
	Greenbrier	Andrew	155	\$7.20	\$1,116.00
	Hazelton	Suzanne	160	\$5.90	\$944.0
	Justice	Francis	115	\$6.40	\$736.0
	Larkin	Mike	160	\$6.25	\$1,000.0
	Lei	Tiffany	85	1771	\$510.0
	McDonald	Heather	160		\$1,833.6
	McFadden	Sheila	140		\$644.0
	Norris	Joe	160		\$1,064.0
	Oliver	Hardy	160		\$1,750.4
	Salteri	Sharon			\$1,080.0
	Spencer	Tracy	160		\$562.5
	Zook		90		\$21,876.7
			Total fo	r Oct 31, 1985:	\$21,070.1
			100	\$6.00	\$600.0
Nov 30, 1985	Allendorfer	Barbara	14		\$679.0
	Andrews	Kaaren	14	1,711	
	Beaman	Jason	9		
	Brooks	Karen	16		
	Bruce	Jack	14		
	Davis	Kate	14	45.50	- 1

Dete	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay
Dec 31, 1985 Li M M N 0 P	Lei McDonald McFedden Norris Oliver Perker Salieri Spencer	Tiffany Heather Sheila Joe Hardy Peter Sheron Tracy Dori	160 82 160 140 160 87 160 160	\$6.25 \$6.00 \$11.46 \$4.60 \$6.65 \$5.00 \$10.94 \$6.75 \$6.25	\$1,000.00 \$492.00 \$1,833.60 \$644.00 \$1,064.00 \$435.00 \$1,750.40 \$1,080.00 \$500.00
	Zook		Total for	Dec 31, 1985:	\$21,942.30
				Total:	\$65,524.40

Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$80.30	\$54.99	\$109.98	\$135.29	\$644.71
\$68.30	\$49.24	\$98.47	\$117.54	\$580.86
\$68.80	\$66.09	\$132.19	\$134.89	\$802.61
\$7.20	\$35.25	\$70.50	\$42.45	\$457.55
\$122.10	\$70.50	\$141.00	\$192.60	
\$48.80	\$56.99	\$113.97	\$105.79	\$807.40
\$250.60	\$172.92	\$345.84	\$423.52	\$702.51
\$259.40	\$176.19	\$352.39	\$435.59	\$2,029.28
\$63.60	\$67.68	\$135.36	\$131.28	\$2,063.61
\$105.60	\$78.68	\$157.36	\$184.28	\$828.72
\$68.80	\$66.55	\$133.10	\$135.35	\$931.72
\$49.30	\$51.89	\$103.78	\$101.19	\$808.65
\$106.20	\$70.50	\$141.00	\$176.70	\$634.81
\$39.80	\$35.96	\$71.91	\$75.76	\$823.30
\$202.90	\$129.27	\$258.54	\$332.17	\$434.25
\$62.30	\$45.40	\$90.80	\$107.70	\$1,501.43
\$53.20	\$75.01	\$150.02		\$536.30
\$161.00	\$123.40	\$246.81	\$128.21	\$935.79
\$105.60	\$76.14	\$152.28	\$284.40	\$1,466.00
\$24.40	\$39.66	\$79.31	\$181.74	\$898.26
\$1,948.20	\$1,542.31		\$64.06	\$498.44
V.,V-10.20	\$1,542.51	\$3,084.61	\$3,490.51	\$18,386.19
\$56.30	\$42.30	\$84.60	\$98.60	<b>*</b> F01.40
\$62.30	\$47.87	\$95.74	\$110.17	\$501.40
\$68.80	\$65.21	\$130.43	\$134.01	\$568.83
\$14.40	\$39.66	\$79.31	\$54.06	\$790.99
\$122.10	\$70.50	\$141.00	\$192.60	\$508.44
\$54.80	\$59.90	\$119.79	\$114.70	\$807.40 \$734.90

Withholding	FICA	FICA Total	Total Deductions	Not Day
\$106.20	\$70.50	\$141.00		Net Pay
\$36.80	\$34.69	\$69.37	¥110.10	\$823.30
\$202.90			\$71.49	\$420.51
	\$129.27	\$258.54	\$332.17	\$1,501,43
\$62.30	\$45.40	\$90.80	\$107.70	\$536.30
\$53.20	\$75.01	\$150.02	\$128.21	
\$27.80	\$30.67	\$61.34		\$935.79
\$161.00	\$123.40		\$58.47	\$376.53
\$105.60		\$246.81	\$284.40	\$1,466.00
	\$76.14	\$152.28	\$181.74	\$898.26
\$17.20	\$35.25	\$70.50	\$52.45	
\$1,921.00	\$1,546.93			\$447.55
	¥1,040.93	\$3,093.86	\$3,467.93	\$18,474.37
\$5,821.00	\$4,619.47	\$9,238.94	\$10,440.47	\$55,083.93

If you scroll all the way to the left, your report window will now look like this:

Previe		IA->Z	11->9	Not Sorted
Sort	A->Z Last Name	First Name	Date	No. of Hours
Heading	Last Name	First Name	Date	No. of Hours
Field	Last Name	THIS CITALINE		
by Date		-		
by First N				
by Last No	a (			
Grand			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

☐ Add totals in the By Last Name and Grand rows for the following columns:

Gross Pay Withholding FICA FICA Total Total Deductions Net Pay

Preview	Summar	y Report		
Sort			ptal Deduction	Net Pay
Heading	FICA	FILA TOTAL	Dial Deductions	
Field	FICA	FICH TOTA	tal Deductions	Herring
by Date				
bu First Na				Total
by Last Na	Total	Total	1000	Total
Grand	Total	Total	Total	Total
010.10				

☐ Widen the Total Deductions heading just as you did for the monthly report so it can be seen on the report.

Previe Sort				
Heading	FICA	FICA Total	Total Deductions	<ul> <li>Net Pay</li> </ul>
Field	FICA	FICA Total	Total Deductions	Net F
by Last Na				Total
by Date	Total	Total	Total	Total
Grand	Total	Total	Total	Total

☐ Then preview the report.

Your report should look similar to the one for Genorio's shown in Figure 4-9 on the next two pages.

□ If it looks the way you want it to, save it using the Save Report As... command from the File menu, and name it Employee Report.

Now both reports are saved on the Payroll Master disk. Each month when you want to print a report, simply open the report window by choosing Report... from the Organize menu, choose the Open Report... command from the File menu, double-click on the name of the report you want, and print.

### **Doing Monthly Payroll**

The following are the payroll tasks you'll do each month:

- If you've hired any new employees or if any employees have left, update the personnel datafile and the Payroll Skeleton datafile.
- Make a copy of the Payroll Skeleton datafile to use to enter the current month's data.
- Rename the copy to reflect the current pay period and enter your monthly payroll information.
- Copy data from the current month into the Payroll Master datafile.
- Print a monthly report, a cumulative monthly report, and an employee report.

When you first start using File for payroll, you can use this list as a check-list when you do payroll each month.

## **Updating the Personnel and Skeleton Datafiles**

If the employees you're paying this month are exactly the same as the ones you paid last month, you can omit this step. Complete this step only if you've added new employees, lost any old ones, or changed the status of any employee through promotion or pay raise.

To add new employees:

- ☐ Open the personnel datafile.
- □ If necessary, hold down the Command key and press T to toggle from the View 2 form (payroll) to the View 1 form (personnel).
- □ Add the new employee information to the end of the personnel datafile by clicking an insertion point in the first field of the new record and typing it in.
- □ Hold down the Command key and press T to toggle to the View 2 form (payroll), and enter the new employee's Hourly Rate and Withholding Allowances.
- □ Select the entire new employee record by clicking on the record number, and copy it to the Clipboard by simply choosing Copy from the Edit menu.

Figure 4-9. Part of a monthly report by employee for Genorio's Deli

	First Nome	Date	No. of Hours	Hourly Rate	Gross Pay
Last Name		Oct 31, 1985	130	\$6.00	\$780.00
Allendorfer	Barbara	000 31, 1300		Allendorfer:	\$780.00
	Kaaren	Oct 31, 1985	144	\$4.85	\$698.40
Andrews	Kaaren	000 51, 1505	Total	for Andrews:	\$698.40
	Jason	Oct 31, 1985	150	\$6.25	\$937.50
Beaman	Jeson	000 01, 1900	Tota	l for Beamen:	\$937.50
	Warran.	Oct 31, 1985	80	\$6.25	\$500.00
Brooks	Karen	000 31, 1303	Tot	al for Brooks:	\$500.00
2-1-3	toole	Oct 31, 1985	160	\$6.25	\$1,000.00
Bruce	Jack	00001, 1200	То	tal for Bruce:	\$1,000.00
	Kate	Oct 31, 1985	137	\$5.90	\$808.30
Davis	Vare	000 01, 1500	To	otal for Davis:	\$808.30
	Amanla	Oct 31, 1985	160	\$15.33	\$2,452.80
Genorio	Angela Victor	Oct 31, 1985	160	\$15.62	\$2,499.20
	410001		Total	al for Genorio:	\$4,952.00
m ii sabadaa	Andrew	Oct 31, 1985	160	\$6.00	\$960.00
Greenbrier	MILLIETT	500 51, 1505	Total 1	for Greenbrier:	\$960.00
Hazelton	Suzanne	Oct 31, 1985	155		
Mazerton	Suzumie	00.01,	Tota	I for Hazelton:	\$1,116.00

Last Name	First Name	Date	No. of Hours	Hourly Rate	Gross Pay
Zook	Dor1	Oct 31, 1985	90 T	\$6.25 _ otel for Zook:	\$562.50 \$562.50
				Total:	\$21,876.70

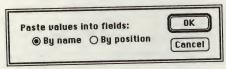
Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$80.30	\$54.99	\$109.98	\$135.29	\$644.71
\$80.30	\$54.99	\$109.98	\$135.29	\$644.71
\$68.30	\$49.24	\$98.47	\$117.54	\$580.86
\$68.30	\$49.24	\$98.47	\$117.54	\$580.86
\$68.80	\$66.09	\$132.19	\$134.89	\$802.61
\$68.80	\$66.09	\$132.19	\$134.89	\$802.61
\$7.20	\$35.25	\$70.50	\$42.45	\$457.55
\$7.20	\$35.25	\$70.50	\$42.45	\$457.55
\$122.10	\$70.50	\$141.00	\$192.60	\$807.40
\$122.10	\$70.50	\$141.00	\$192.60	\$807.40
\$48.80	\$56.99	\$113.97	\$105.79	\$702.51
\$48.80	\$56.99	\$113.97	\$105.79	\$702.51
\$250.60	\$172.92	\$345.84	\$423.52	\$2,029,28
\$259.40	\$176.19	\$352.39	\$435.59	\$2,029.28
\$510.00	\$349.12	\$698.23	\$859.12	\$4,092.88
\$63.60	\$67.68	\$135.36	\$131.28	\$828.72
\$63.60	\$67.68	\$135.36	\$131.28	\$828.72
\$105.60	\$78.68	\$157.36	\$184.28	\$071.70
\$105.60	\$78.68	\$157.36	\$184.28	\$931.72 \$931.72

Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$24.40	\$39.66	\$79.31	\$64.06	\$498.44
\$24.40	\$39.66	\$79.31	\$64.06	\$498.44
\$1,948.20	\$1,542.31	\$3,084.61	\$3,490.51	\$18,386.19

		Undo Typ	ing	₩Z	enori	o's Personnel	
	Las				ame	Street Address	City, Stak
7	Beam	Cut		<b>36H</b>		419 Queen Anne Ave.	Seattle, WA
-	Geno	Copy	_	жc		603 1st Ave.	Seattle, WA
_	Geno	Paste	7	₩IJ	-	603 1st Ave.	Seattle, WA
_	Salie	Clear				717 Campbell	Mukilteo, W
	Bruce	Select A	11	₩A	_	5102 Pecks Drive	Seattle, WA
	Justi					6063 Gatehouse	Mukilteo, W
	Haze	Show Cl	ipboa	rd		8017 - 52nd S.W.	Seattle, WA
	Allend		Barb			404 Ocean	Seattle, WA
	Larkir		Mike			6291 - 8th Ave.	Mukilteo, W.
	Davis		Kate			2012 - 23rd Ave.	Mukilteo, W.
	McDon	ald	Heat	_		212 Cedar	Mukilteo, W.
		lalu	Tiff			6022 - 12th Dr.	Mukilteo, W.
18	Lei		Hard			3315 Sound Vista	Seattle, WA
19	Oliver		Trac			2075 33rd Ave. W.	Seattle, WA
20	Spend		Pete	_		5795 Webster Ave.	Seattle, WA
21	Parke		rete	71			
New							

□ Choose Open Datafile... from the File menu and open the Payroll Skeleton datafile, select the new record by clicking in the New box in front of it, and choose Paste from the Edit menu.

You'll see this dialog box:



Because each field name is the same as in our personnel datafile, you can use the default option (By Name) to paste each field in the Clipboard into the fields of the new record by corresponding field names.

□ Click the OK button.

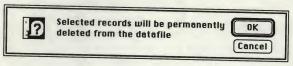
File pastes the new employee information in the new record slot by name.

	Last Name	First Name	Street Address	City, Stat
7	Beaman	Jason	419 Queen Anne Ave.	Seattle, WA
_	Genorio	Victor	603 1st Ave.	Seattle, WA
_	Genorio	Angela	603 1st Ave.	Seattle, WA
	Salieri	Sharon	717 Campbell	Mukilteo, W
1	Bruce	Jack	5102 Pecks Drive	Seattle, WA
	Justice	Francis	6063 Gatehouse	Mukilteo, W
	Hazelton	Suzanne	8017 - 52nd S.W.	Seattle, WA
	Allendorfer	Barbara	404 Ocean	Seattle, WA
	Larkin	Mike	6291 - 8th Ave.	Mukilteo, W
-	Davis	Kate	2012 - 23rd Ave.	Mukilteo, W
17	McDonald	Heather	212 Cedar	Mukilteo, W
• •	Lei	Tiffany	6022 - 12th Dr.	Mukilteo, W
19	Oliver	Hardy	3315 Sound Vista	Seattle, WA
20	Spencer	Tracy	2075 33rd Ave. W.	Seattle, WA
$\frac{20}{21}$	Parker	Peter	5795 Webster Ave.	Seattle, WA
ew				

#### To delete employee information:

- □ Open the personnel datafile. Select the record for the employee information you're deleting by clicking on the record number.
- □ Press the Backspace key.

A dialog box appears, asking you to confirm that you want to delete the record.



- Click the OK button and that employee's information is removed from the personnel datafile.
- □ Load the skeleton datafile. Select the record you wish to delete. Press the Backspace key.

#### Making a Copy of the Skeleton

Each month, you need to make a copy of the Payroll Skeleton datafile you've just completed. This will leave the skeleton intact so you can use it each month to give you a datafile to use for the current month's payroll. We'll name the copy November Payroll '85.

- □ Quit File by choosing Quit from the File menu.
- □ On the Macintosh desktop, click on the Payroll Skeleton datafile icon to select it.
- □ Choose Duplicate from the File menu.
- □ Name the new file (currently highlighted and called Copy of Payroll Skeleton) November Payroll '85 (or December Payroll '85 or January Payroll '86) by typing the new name. Press Return.

### **Entering Monthly Payroll Information**

Now load this new file and add the payroll information for the new month (in our example, November).

- $\hfill\Box$  Double-click on the November Payroll '85 icon to open your current month's payroll file.
- $\hfill\Box$  Add payroll information to the empty fields.

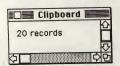
Remember that you can use Command-hyphen to enter the current date from the Macintosh system calendar and Command-apostrophe to copy information from the same field in the previous record.

# **Copying Current Information to the Payroll Master**

The Clipboard is used to transfer information between datafiles. Select the records you want to copy, copy them into the Clipboard, open the Payroll Master datafile, and paste them in.

- □ Click on any record number (but not the New record number box), then choose the Select All command from the Edit menu.
- □ Choose Copy from the Edit menu.

If you want to be sure these records were actually copied to the Clipboard, choose Show Clipboard from the Edit menu. You should see a message like this:



□ Now choose Open Datafile... from the File menu.

The Payroll Master datafile is on a different disk.

- □ Click the Eject button.
- □ Insert the Payroll Master disk and double-click on Payroll Master 1985 to open it.
- ☐ Scroll to the New record box at the bottom of your payroll master datafile and click on the word New.

	Date	Last Name	Master - 1985 First Name	No. of Hours	Hourly
6	Oct 31, 1985	Brooks	Karen	80	
7	Oct 31, 1985	Beaman	Jason	150	
8	Oct 31, 1985	Genorio	Victor	160	\$
	Oct 31, 1985	Genorio	Angela	160	\$
	Oct 31, 1985	Salieri	Sharon	160	
	Oct 31, 1985	Bruce	Jack	160	
	Oct 31, 1985	Justice	Francis	160	
13	Oct 31, 1985	Hazelton	Suzanne	155	
	Oct 31, 1985	Allendorfer	Barbara	130	
	Oct 31, 1985	Larkin	Mike	115	
	Oct 31, 1985	Davis	Kate	137	
17	Oct 31, 1985	McDonald	Heather	85	
	Oct 31, 1985	Lei	Tiffany	160	
19	Oct 31, 1985	Oliver	Hardy	160	
	Oct 31, 1985	Spencer	Tracy	160	
N					

This selects the entire new record as the place to start pasting.

□ Choose Paste from the Edit menu.

You'll see the dialog box:

Paste values into fields:  By name O By position	OK Cancel
--	-----------

□ Click OK.

As if by magic, your current month's payroll records are then pasted into the Payroll Master datafile, beginning at the New record position.

 $\hfill\Box$  Scroll up to see that the new payroll records were pasted in.

Payroll Master - 1985									
0F		Last Name	First Name	No. of Hours	Hourly				
25	Nov 30, 1985	McFadden	Sheila	160	4				
26	Nov 30, 1985	Brooks	Karen	90					
27	Nov 30, 1985	Beaman	Jason	148					
	Nov 30, 1985	Genorio	Victor	160	-				
	Nov 30, 1985	Genorio	Angela	160	- 4				
	Nov 30, 1985	Salieri	Sharon	160	- 4				
	Nov 30, 1985	Bruce	Jack	160	1				
32	Nov 30, 1985	Justice	Francis	160					
33	Nov 30, 1985	Hazelton	Suzanne	130					
34	Nov 30, 1985	Allendorfer	Barbara						
35	Nov 30, 1985	Larkin	Mike	100					
36	Nov 30, 1985	Davis	Kate						
	Nov 30, 1985	McDonald	Heather	144					
88	Nov 30, 1985	Lei	Tiffany	85					
19	Nov 30, 1985	Oliver	Hardy	160					
10	Nov 30, 1985	Spencer	Tracy	160					
w	40K2	Oponious	Tracy	160					

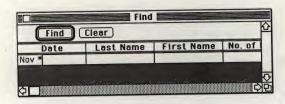
### **Printing Reports**

Now you can use File to print three reports: a payroll report with information for the current month, a cumulative payroll report, and a cumulative employee report. Each month you'll want to run a payroll report for that month, but you'll probably only need to do the cumulative payroll and cumulative employee reports at the end of each quarter when you need the information for quarterly tax reporting.

- □ Choose Report... from the Organize menu.
- $\hfill\Box$  Choose Open Report... from the File menu.
- □ Double-click on Monthly Report to open it.

To print a report with only the current month's information:

- □ Choose Find... from the Organize menu.
- □ In the Date field, type the name of the current month followed by an asterisk (\*). Be sure to type the name of the month exactly as it's displayed in the datafile window.



□ Click the Find button.

This will find all records for November.

If you want to check the report before you print it, click on the Preview button to see a payroll report for the current month on your screen. Click Done to end the preview.

Choose Print Report... from the File menu. When the dialog box appears, click the OK button and your report will start printing.

A sample current monthly payroll report is shown in Figure 4-10.

To print a cumulative monthly report:

□ Choose Show All Records from the Organize menu.

If you want to check the report before printing it, click on the Preview button to see the cumulative monthly report, then click Done.

☐ Choose Print Report... from the File menu and click the OK button.

A sample cumulative monthly report is shown in Figure 4-11.

To print a cumulative employee report:

- □ Choose Open Report... from the File menu.
- □ Double-click on Employee Report.

If you want to check the report before printing it, click the preview button to check the report before you print, then click Done.

□ Choose Print Report... from the File menu and click the OK button.

A sample cumulative employee report is shown in Figure 4-12.

That's all there is to doing payroll each month. As you can see, it's pretty

simple and eminently faster than doing the same tasks by hand.

As you continue to work with your payroll and personnel datafiles, you'll continue to add new fields, change fields, and customize information until you get what works best for you. Datafiles are not created once and for all; they grow, and yours will continue to evolve with you and your business.

Figure 4-10. A sample current monthly payroll report

<b>Date</b> Nov 30, 1985	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay
1404 30, 1903	Allendorfer Andrews	Barbara Kaaren	100	\$6.00	\$600.00
	Beaman	Jason	140	\$4.85	\$679.0
	Brooks	Karen	148	\$6.25	\$925.00
	Bruce	Jack	90	\$6.25	\$562.50
	Davis	Kate	160	\$6.25	\$1,000.00
	Genorio		144	\$5.90	\$849.60
	00110110	Angela Victor	160	\$15.33	\$2,452.80
	Greenbrier	Andrew	160	\$15.62	\$2,499.20
	Hazelton		160	\$6.00	\$960.00
	Justice	Suzanne	130	\$7.20	\$936.00
	Larkin	Francis	160	\$5.90	\$944.00
	Let	Mike	150	\$6.40	\$960.00
	McDonald	Tiffany	160	\$6.25	\$1,000.00
	McFadden Norris	Heather Shella Joe	85	\$6.00	\$510.00
			160	\$11.46	\$1,833.60
	Oliver		133	\$4.60	\$611.80
Park	Parker	Hardy	160	\$6.65	\$1,064.00
	Salieri	Peter	90	\$5.00	\$450.00
	Spencer	Sharon	160	\$10.94	\$1,750.40
	openes Tracy	Tracy	160	\$6.75	\$1,080.00
			Total for N	ov 30, 1985:	\$21,667.90
				Total:	\$21,667.90

Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$56.30	\$42.30	\$84.60	\$98.60	
\$62.30	\$47.87	\$95.74	\$110.17	\$501.40
\$68.80	\$65.21	\$130.43	\$134.01	\$568.83
\$14.40	\$39.66	\$79.31		\$790.99
\$122.10	\$70.50	\$141.00	\$54.06	\$508.44
\$54.80	\$59.90	\$119.79	\$192.60	\$807.40
\$250.60	\$172.92	\$345.84	\$114.70	\$734.90
\$259.40	\$176.19	\$352.39	\$423.52	\$2,029.28
\$63,60	\$67.68		\$435.59	\$2,063.61
\$105.60	\$65.99	\$135.36	\$131.28	\$828.72
\$68.80	\$66.55	\$131.98	\$171.59	\$764.41
\$85.30	\$67.68	\$133.10	\$135.35	\$808.65
\$106.20	\$70.50	\$135.36	\$152.98	\$807.02
\$39.80		\$141.00	\$176.70	\$823.30
\$202.90	\$35.96	\$71.91	\$75.76	\$434.25
\$56.30	\$129.27	\$258.54	\$332.17	\$1,501.43
\$53,20	\$43.13	\$86.26	\$99.43	\$512.37
	\$75.01	\$150.02	\$128.21	\$935.79
\$30.80	\$31.73	\$63.45	\$62.53	\$387.48
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$1,967.80	\$1,527.59	\$3,055.17	\$3,495.39	\$18,172.51
\$1,967.80	\$1,527.59	\$3,055.17	\$3,495.39	\$18,172.51

Figure 4-11. Part of a sample cumulative monthly report

	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay
Date	Allendorfer	Barbara	130	\$6.00	\$780.00
Oct 31, 1985	Andrews	Kaaren	144	\$4.85	\$698.40
		Jason	150	\$6.25	\$937.50
	Beaman	Karen	80	\$6.25	\$500.00
	Brooks	Jack	160	\$6.25	\$1,000.00
	Bruce	Kate	137	\$5.90	\$808.30
	Davis	Angela	160	\$15.33	\$2,452.80
	Genorio	Victor	160	\$15.62	\$2,499.20
Greenbrier		Andrew	160	\$6.00	\$960.00
			155	\$7.20	\$1,116.00
	Hazel ton	Suzanne Francis	160	\$5.90	\$944.00
	Justice		115	\$6.40	\$736.00
	Larkin	Mike	160	\$6.25	\$1,000.00
	Lei	Tiffany	85	\$6.00	\$510.00
	McDonald	Heather Sheila	160	\$11.46	\$1,833.60
	McFadden		140	\$4.60	\$644.00
	Norris	Joe	160	\$6.65	\$1,064.00
	Oliver	Hardy	160	\$10.94	\$1,750.40
	Salieri	Sharon	160	\$6.75	\$1,080.00
	Spencer	Tracy	90	\$6.25	\$562.50
	Zook	Dori		Oct 31, 1985:	\$21,876.70
			TOTAL TO	000 51, 1500.	<b>V</b> = 1,011
	111	Barbara	100	\$6.00	\$600.0
Nov 30, 1985	Allendorfer	Kaaren	140		\$679.0
	Andrews		148	\$6.25	\$925.0
	Beaman	Jason	90		\$562.5
	Brooks	Karen Jack	160		\$1,000.0
	Bruce		144		\$849.6
	Davis	Kate	144	\$3.90	\$045.C

Date	Last Name	First Name	No. of Hours	Hourly Rate	Gross Pay
Dec 31, 1985	Lei McDonald McFadden Norris Oliver Parker Salieri	Tiffeny Heather Sheila Joe Hardy Peter Sharon	160 82 160 140 160 87	\$6.25 \$6.00 \$11.46 \$4.60 \$6.65 \$5.00 \$10.94	\$1,000.00 \$492.00 \$1,833.60 \$644.00 \$1,064.00 \$435.00 \$1,750.40 \$1,080.00
Spencer Zook		Tracy Dori	160 80 Total for	\$6.75 \$6.25 Dec 31, 1985:	\$1,080.00 \$500.00 \$21,942.30 \$65,524.40

\$54.99 \$49.24 \$66.09 \$35.25	\$109.98 \$98.47	\$135.29	Net Pay \$644.71
\$66.09	\$98.47		3044.71
	\$170.10	\$117.54	\$580.86
\$35.25	\$132.19	\$134.89	
	\$70.50	\$42.45	\$802.61 \$457.55
\$70.50	\$141.00	\$192.60	
\$56.99			\$807.40
\$172.92			\$702.51
\$176.19			\$2,029.28
\$67.68			\$2,063.61
\$78.68			\$828.72
\$66.55			\$931.72
\$51.89			\$808.65
\$70.50			\$634.81
\$35.96			\$823.30
\$129.27			\$434.25
\$45.40			\$1,501.43
\$75.01			\$536.30
			\$935.79
			\$1,466.00
			\$898.26
			\$498.44
¥1,542.51	\$3,004.61	\$3,490.51	\$18,386.19
\$42.30	\$8460	t00 60	
\$47.87			\$501.40
\$65.21			\$568.83
\$39.66			\$790.99
			\$508.44
\$59.90			\$807.40 \$734.90
	\$172.92 \$176.19 \$67.68 \$78.68 \$66.55 \$51.89 \$70.50 \$35.96 \$129.27 \$45.40 \$75.01 \$123.40 \$76.14 \$39.66 \$1,542.31 \$42.30 \$47.87 \$65.21 \$39.66 \$70.50	\$172.92 \$345.84 \$176.19 \$352.39 \$67.68 \$135.36 \$78.68 \$157.36 \$66.55 \$133.10 \$51.89 \$103.78 \$70.50 \$141.00 \$35.96 \$71.91 \$129.27 \$258.54 \$45.40 \$90.80 \$75.01 \$150.02 \$123.40 \$246.81 \$76.14 \$152.28 \$39.66 \$79.31 \$42.30 \$84.60 \$47.87 \$95.74 \$65.21 \$130.43 \$39.66 \$79.31 \$70.50 \$141.00	\$156.99 \$113.97 \$105.79 \$172.92 \$345.84 \$423.52 \$176.19 \$352.39 \$435.59 \$67.68 \$135.36 \$131.28 \$76.68 \$157.36 \$184.28 \$66.55 \$133.10 \$135.35 \$51.89 \$103.78 \$101.19 \$70.50 \$141.00 \$176.70 \$35.96 \$71.91 \$75.76 \$129.27 \$258.54 \$332.17 \$45.40 \$90.80 \$107.70 \$75.01 \$150.02 \$128.21 \$123.40 \$246.81 \$284.40 \$76.14 \$152.28 \$181.74 \$39.66 \$79.31 \$64.06 \$47.87 \$95.74 \$110.17 \$65.21 \$130.43 \$134.01 \$39.66 \$79.31 \$54.06 \$70.50 \$141.00 \$192.60

	Withholding	FICA	FICA Total	Total Deductions	Net Pay
	\$106.20	\$70.50	\$141.00	\$176.70	\$823.30
	\$36.80 \$202.90	\$34.69	\$69.37	\$71.49	\$420.51
	\$62.30	\$129.27 \$45.40	\$258.54	\$332.17	\$1,501.43
	\$53.20	\$75.01	\$90.80 \$150.02	\$107.70	\$536.30
	\$27.80	\$30.67	\$61.34	\$128.21 \$58.47	\$935.79
	\$161.00	\$123.40	\$246.81	\$284.40	\$376.53 \$1,466.00
	\$105.60 \$17.20	\$76.14	\$152.28	\$181.74	\$898.26
	\$1,921.00	\$35.25	\$70.50	\$52.45	\$447.55
,	¥1,921.00	\$1,546.93	\$3,093.86	\$3,467.93	\$18,474.37
	\$5,821.00	\$4,619.47	\$9,238.94	\$10,440.47	\$55,083.93

Figure 4-12. Part of a sample cumulative employee report

Last Name	First Name	Date	No. of Hours	Hourly Rate	Gross Pay
	Barbara	Oct 31, 1985	130	\$6.00	\$780.00
Allendorfer	Dai vai a	Nov 30, 1985	100	\$6.00	\$600.00
		Dec 31, 1985	112	\$6.00	\$672.00
			Total fo	r Allendorfer:	\$2,052.00
		Oct 31, 1985	144	\$4.85	\$698.40
Andrews	Kaaren	Nov 30, 1985	140	\$4.85	\$679.00
		Dec 31, 1985	139	\$4.85	\$674.15
		Dec 31, 1903		for Andrews:	\$2,051.55
			150	\$6.25	\$937.50
Beaman	Jason	Oct 31, 1985	148	\$6.25	\$925.00
		Nov 30, 1985	155		\$968.75
		Dec 31, 1985		al for Beaman:	\$2,831.25
			80	\$6.25	\$500.00
Brooks	Karen	Oct 31, 1985	90		\$562.50
		Nov 30, 1985	88		\$550.00
		Dec 31, 1985		tal for Brooks:	\$1,612.50
			160	\$6.25	\$1,000.00
Bruce	Jack	Oct 31, 1985	160		\$1,000.00
		Nov 30, 1985	160		\$1,000.00
		Dec 31, 1985		otal for Bruce:	\$3,000.00
			137	\$5.90	\$808.30
Davis	Kate	Oct 31, 1985	134		\$849.60
		Nov 30, 1985	144	\$3.90	<b>4-</b>

Last Name	First Name	Date	No. of Hours	Hourly Rate	Gross Pay
Fast Maine	THE INCHES		To	tal for Oliver:	\$3,192.00
	Peter	Dec 31, 1985	87	\$5.00	\$435.00
Parker	Peter	Dec 31, 1300	To	tal for Parker:	\$435.00
- 4	Sheron	Oct 31, 1985	160	\$10.94	\$1,750.40
Salieri	Snaron	Nov 30, 1985	160	\$10.94	\$1,750.40
		Dec 31, 1985	160	\$10.94	\$1,750.40
		Dec 31, 1903		tal for Salieri:	\$5,251.20
		Oct 31, 1985	160	\$6.75	\$1,080.00
Spencer	Tracy	Nov 30, 1985	160		\$1,080.00
		Dec 31, 1985	160		\$1,080.00
		Dec 31, 1903		al for Spencer:	\$3,240.00
	B	Oct 31, 1985	90	\$6.25	\$562.5
Zook	Dori	Nov 30, 1985	78		\$487.5
		Dec 31, 1985	80		\$500.0
		Dec 31, 1903	-	Total for Zook:	\$1,550.0
				Total:	\$65,524.4

Net Pay	Total Deductions	FICA Total	FICA	Withholding
\$644.7	\$135.29	\$109.98	\$54.99	\$80.30
\$501.4	\$98.60	\$84.60	\$42.30	\$56.30
\$562.3	\$109.68	\$94.75	\$47.38	\$62.30
\$1,708.4	\$343.57	\$289.33	\$144.67	\$198.90
\$580.8	\$117.54	\$98.47	\$49.24	\$68.30
\$568.8	\$110.17	\$95.74	\$47.87	\$62.30
\$564.3	\$109.83	\$95.06	\$47.53	\$62.30
\$1,714.0	\$337.53	\$289.27	\$144.63	\$192.90
\$802.6	\$134.89	\$132.19	\$66.09	\$68.80
\$790.9	\$134.01	\$130.43	\$65.21	\$68.80
\$826.1	\$142.60	\$136.59	\$68.30	\$74.30
\$2,419.7	\$411.50	\$399.21	\$199.60	\$211.90
\$457.5	\$42.45	\$70.50	\$35.25	\$7.20
\$508.4	\$54.06	\$79.31	\$39.66	\$14.40
\$499.2	\$50.78	\$77.55	\$38.78	\$12.00
\$1,465.22	\$147.28	\$227.36	\$113.68	\$33.60
\$807.40	\$192.60	\$141.00	\$70.50	\$122.10
\$807.40	\$192.60	\$141.00	\$70.50	\$122.10
\$807.40	\$192.60	\$141.00	\$70.50	\$122.10
\$2,422.20	\$577.80	\$423.00	\$211.50	\$366.30
\$702.51	\$105.79	\$113.97	\$56.99	\$48.80
\$734.90	\$114.70	\$119.79	\$59.90	\$54.80

Withholding	FICA	FICA Total	Total Deductions	Net Pay
\$159.60	\$225.04	\$450.07	\$384.64	\$2,807.36
\$27.80	\$30.67	\$61.34	\$58.47	\$376.53
\$27.80	\$30.67	\$61.34	\$58.47	\$376.53
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00
\$161.00	\$123.40	\$246.81	\$284.40	\$1,466.00
\$483.00	\$370.21	\$740.42	\$853.21	\$4,397.99
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$105.60	\$76.14	\$152.28	\$181.74	\$898.26
\$316.80	\$228.42	\$456.84	\$545.22	\$2,694.78
\$24.40	\$39.66	\$79.31	\$64.06	\$498.44
\$14.80	\$34.37	\$68.74	\$49.17	\$438.33
\$17.20	\$35.25	\$70.50	\$52.45	\$447.55
\$56.40	\$109.28	\$218.55	\$165.68	\$1,384.33
\$5,821.00	\$4,619.47	\$9,238.94	\$10,440,47	\$55,083.93

Three years ago when Gus Sprocket purchased the FreeWheeler bike shop, he had inventory and ordering under control. He had worked in the store for two years, knew the inventory, and his manual system worked pretty well: His repair people kept "needs lists" for parts, and he could order accessories by merely glancing around the shop and

noting stock that was low.

But ordering and tracking inventory isn't as easy as that anymore. FreeWheeler is doing a higher volume of business, with almost double its inventory of three years ago. Gus has also opened another store, Northwest Pedaler, and formed a corporation called Cycles Unlimited. What he needs is a good system for keeping track of his inventory—what he has in stock, what he's sold, and what needs to be ordered. That way he can see which items are his best-sellers, which may be overstocked and should be put on sale, and which aren't selling and should be discontinued. Gus needs to know which location currently has which items, and when orders come in, which orders should be shipped to which location.

Inventory and ordering have become too cumbersome to do manually, so Gus would like some help from File and the Mac. And that's what this section does: It shows how Gus computerized his inventory and ordering information. Chapter 5 gives step-by-step instructions for creating an inventory log for FreeWheeler and Northwest Pedaler. An inventory log gives Gus a historical record of all transactions made at each location—starting inventory, sales, and orders. At any time, he can use this log to determine the current inventory level of any item, and know not only what he has in stock, but also how much it's worth.

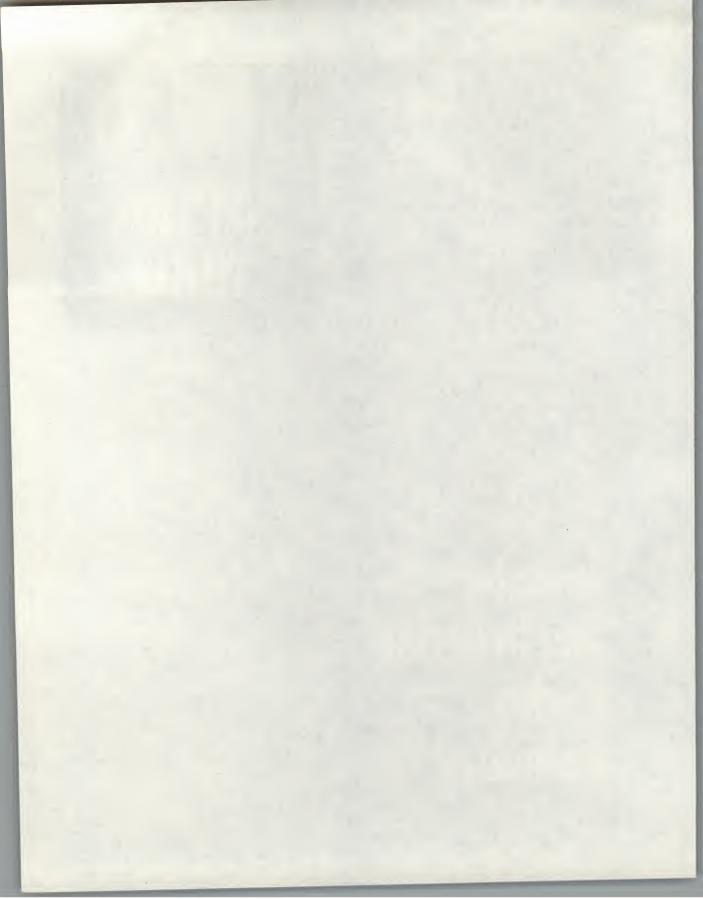
Chapter 6 gives step-by-step instructions for making an order log. An order log is a list of current inventory levels at each location. It also contains a restock-level field; Gus compares the inventory level to the restock level, so he easily knows when to reorder. Then he transfers this information to an order form he creates using File, prints it out, and it's ready to mail to his suppliers. Gus can also use this order log for printing sales sheets for his sales staff to use so they know which items the stores stock in case they can't locate a

particular item or it is currently out of stock.

There are some limitations to doing inventory tracking on a small computer. In our Cycles Unlimited example, we're assuming a Macintosh with two disk drives and an inventory of 200 items. We're also assuming about 200 transactions a month. In this hypothetical situation, we might get six months' worth of inventory data on one disk. At that point we'd need to start a new disk for the next six-month period and re-enter current inventory levels. Re-entering information is a chore, but it seems reasonable twice a year and is certainly preferable to a manual system. But if you have an inventory much larger than this, re-entering your inventory every month, for example, would not be reasonable. If your inventory is much larger, the only reasonable alternative is to add a hard disk to your Macintosh.

# SECTION THREE

Inventory and Ordering: Cycles Unlimited





# Inventory

To start computerizing the inventory for Cycles Unlimited, Gus Sprocket first makes a list of the categories of inventory information he wants to record. Next he creates an inventory form and enters his initial inventory in his inventory datafile. He then records daily transactions so he gets some practice using the inventory system. Then he uses the transaction information to generate reports so he can distribute up-to-the-minute inventory information to his staff at any time. He copies monthly totals to a master inventory (in case anything happens to his information, he has another record in a different place). Finally, he updates the inventory, adding and deleting items as necessary. In six months, when his inventory disk is full, he starts a new six months' inventory disk. To set up an inventory system for your own business, you'll need to go through these same steps, which are described in detail in this chapter.

We've put together the following list of fields for Cycles Unlimited. Most likely you will need at least these fields for your own business, and you may need to add additional fields for specialized needs. For example, if your inventory has a lot of small parts, you may wish to add a field called Bin Number that specifies exactly where each part is kept.

Here are the fields for the bike shops' inventory form:

• Description

This field identifies the items in the inventory. No two parts should have the same description.

Cost

This field contains the wholesale price of the item at the time of the transaction—initial inventory, sale, or order. Since the price is kept with each entry, you can find all entries of a particular part to see how the price has changed.

• Sale

If the transaction is a sale, use this field to record the number of items sold.

Order

If the transaction is an order from a supplier, use this field to record the number of items received in the order.

• Init

When you first computerize your inventory, this number field contains the number of items you have on hand—init stands for initial inventory.

Quantity

This is a computed number field that contains a positive value if the transaction was an order or initial inventory and a negative value if the transaction was a sale. In the inventory report, this field has the information so the report can display the quantity of any item on hand at any time.

• Total Cost

This computed number field multiplies the Quantity field times the Cost field for each record and produces a positive value for initial inventory and orders and a negative value for sales. This enables you to produce a report showing the current dollar value of inventory at any time.

• Date

This field contains the transaction date.

Location

This field contains the initials for the store initiating the transaction (FW stands for FreeWheeler and NWP for Northwest Pedaler). The Location field allows you to track inventory by location.

If this is your first time using an inventory system, you may want to start with a list of fields similar to this. Use this system for a month or two and see how it works. File lets you add fields you find out you need at any time or delete those you're finding not useful.

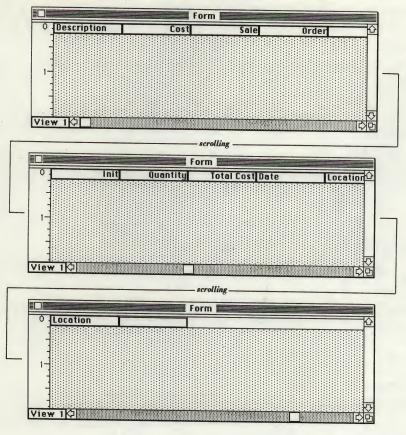
# **Making the Inventory Form**

The first step in creating any datafile is to make the form. For his inventory log, Gus is using File's default List Helper form to create the form shown

in Figure 5-1.

Because it's already built into File, making the List Helper form requires you only to enter field names and their information types, and then format them. List Helper is a good form to use when entering a lot of information, which is what you need to do with an inventory log. Because fields are arranged horizontally, you can start entering information in the next field of a record simply by pressing Return to move to the right.

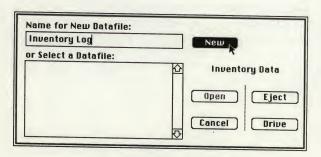
Figure 5-1. The inventory log form for Cycles Unlimited



☐ Start File by double-clicking on the File icon on the Macintosh desktop.

Be sure you have a blank, initialized disk in your second drive. We'll call this disk Inventory Data.

□ Type *Inventory Log* for the name of the new datafile in the dialog box, click the Drive button if necessary so File saves it on your data disk, and click the New button.

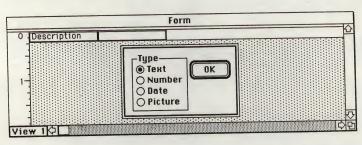


Doing this tells File this is a new datafile named Inventory Log that you want saved on the data disk named Inventory Data in the second drive.

#### **Entering Field Headings**

Now you need to enter the Inventory Log field headings one at a time and designate the information type for each field.

□ Type Description (the name of the first field) and press Return.

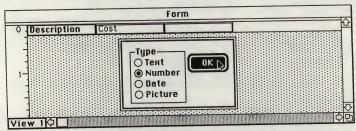


You'll see a dialog box asking you to select an information type for that field. File proposes Text as the information type (indicated by the filled button in front of the word Text). You can either click OK or press Return again to accept the proposed information type. Pressing Return twice after typing the field name is File's shortcut for formatting text fields.

 $\hfill\Box$  Type Cost (the second field) and press Return once.

Cost has the information type Number.

When the dialog box appears, click the Number button and then OK.



Instead of clicking the Number button and OK, you can simply press the N key (for Number) and then Return. Either of these methods can be used to choose an information type, but I find keeping my hands on the keyboard and typing the first letter of the information type and pressing Return is much quicker than using the mouse.

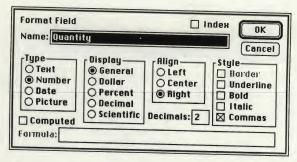
□ Type in the field names from the following list and after each, specify its information type:

Field Name	Information Type
Sale	Number
Order	Number
Init	Number
Quantity	Number
Total Cost	Number
Date	Date
Location	Text

#### **Entering Formulas**

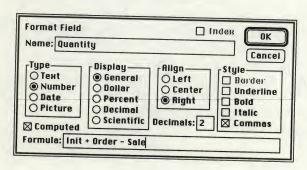
The next step in creating the form is to format as computed number fields the two fields that will contain formulas (Quantity and Total Cost) and enter formulas in these two number fields.

- □ Scroll the form window to the left using the left scroll arrow until the Quantity field is visible.
- □ Double-click on the Quantity field in the form window.

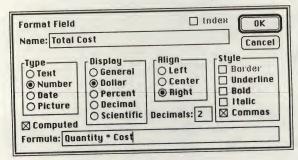


Double-clicking on a field both selects it and opens the Format Field window.

- $\hfill\Box$  Click the Computed box and then click in the Formula box to get an insertion point.
- $\square$  Type Init + Order Sale as the formula.



- □ Click OK or press Return.
- □ Double-click on the Total Cost field, click the Computed box, the Dollar button in the Display list box, and in the Formula box.
- □ Type Quantity \* Cost as the formula:



The asterisk (\*) is used by computers to represent multiplication. Clicking the Dollar button displays numbers entered in the selected field in dollar format—that is, a dollar sign and two decimal places.

□ Click OK or press Return.

The last step in creating the form is to give the Cost field the Dollar format.

- □ Scroll the Form window all the way to the left.
- □ Double-click in the Cost field in the form window.
- □ Click the Dollar button in the Display list box and click the OK button.

You can format the rest of the fields as necessary after you begin entering data and can see how much space you'll need for each field. With List Helper, you can size fields in the datafile window as well as in the form window, so waiting until later won't make your work any more difficult.

# **Entering the Initial Inventory**

The next and most cumbersome step is to enter your initial inventory. You need to gather the description, cost, and quantity on hand for each item in your inventory at each location. It's important to enter accurate information, so this will take some time. But the payoff will come when you begin to use this inventory system. You'll find that you have accurate records readily available. Having your inventory computerized, you'll also know exactly what you have on hand at all times, and when it's time to order, you'll know exactly what you need—no more looking around at the shelves and guessing or ordering a part simply because you can't find any of that type.

Enter information for your inventory now, starting with the Description field. Use the Return key to move from field to field. Pressing Shift and Return moves you to the previous field.

- □ Make the datafile window active by clicking anywhere in it or by clicking the form window close box.
- □ Enter the inventory information shown in Figure 5-2 (or the inventory information for your own business). Remember, you already formatted the Cost field for dollars, so don't type a dollar sign in front of the numbers you enter in this field.

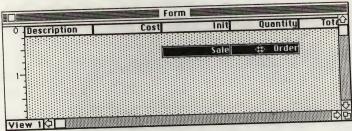
Figure 5-2. Part of the inventory datafile for Cycles Unlimited

Dagastati	Inven	tory Log		
Description	Cost	Sale	Order	Inik
1 helmet - pro	\$32.50			11117
2 helmet - pro	\$32.50			
3 gloves - cycling	\$6.88			
4 gloves - cycling	\$6.88			
5 fenders - rear	\$11.60			
6 fenders - rear	\$11.60			
7 pump - floor	\$17.20			
8 pump - floor	\$17.20			
9 pump - frame	\$14.24			
10 pump - frame	\$14.24			
11 axle - front	\$22.90			
12 axle - front	\$22.90			
13 axle - rear	\$31.75			
14 axle - rear		17-		
15 pedals - black	\$31.75			
16 pedals - black	\$6.75			
	\$6.75			
17 nedals - silver	\$6.45	8888888888888888888	R9990909090000000000000000000000000000	

		inve	ntory Log		
	Init	Quantity	Total Cost	Date	Locate
1	3	3	\$97.50	Jan 1, 1986	NWP
2	2	2	\$65.00	Jan 1, 1986	FW
3	17	17	\$116.96	Jan 1, 1986	NWP
4	25	25	\$172.00	Jan 1, 1986	FW
5	9	9	\$104.40	Jan 1, 1986	NWP
6	13	13	\$150.80	Jan 1, 1986	FW
7	15	15		Jan 1, 1986	NWP
8	8	8	\$137.60	Jan 1, 1986	FW
9	12	12	\$170.88	Jan 1, 1986	NWP
10	11	11		Jan 1, 1986	FW
11	6	6		Jan 1, 1986	NWP
12	8	8		Jan 1, 1986	FW
13	9	9		Jan 1, 1986	NWP
14	8	8		Jan 1, 1986	FW
15	20	20		Jan 1, 1986	NWP
16	16	16		Jan 1, 1986	FW
17 20/20k	5	15	\$96.75		NWP K

For the sake of brevity, the graphics in this chapter and Chapter 6 show only 20 records for the Cycles Unlimited inventory—10 items for each location.

Skip past the Sales and Order fields for now by simply pressing Return twice. You'll use these fields later, when you sell items and reorder. If you have a large inventory and you want to save some time while entering information, you might want to hide the Sales and Order fields by choosing the Show Form command from the Form menu, selecting the Sales and Order fields by holding down the Shift key and clicking on them, and then dragging them down into the patterned hide area.



Then, when you finish entering your initial inventory values, you could drag them back up to where you want them.

# **Shortcuts for Entering Inventory Information**

There are several shortcuts you can use when entering initial inventory information. First, use the Command key and the apostrophe key together to duplicate information from the same field in the previous record into the current field. For example, if you have the same location for several Location fields in succession, when you get to the second Location field, instead of typing the same location initials (FW or NWP) again, simply hold down the Command key and press the apostrophe key, and the location code from the field above will automatically appear in the current field.

Second, if your business has two locations with exactly or almost exactly the same items (but in different quantities), you can fill in the fields for one location that are the same for the other location (such as Description and Cost). Then you can select all of these records by dragging across the record numbers, copy these records to the Clipboard by choosing Copy from the File menu, select the new record by clicking on the word New, and paste the records in there. Now all you need to do to complete your inventory is enter the correct information for the Init and Location fields for each of these records. This is much easier than entering the same information twice. If some of the records you copy are for items that aren't stocked at the second location, you can delete those records by clicking on the record number, then choosing the Clear command from the Edit menu or pressing the Backspace key.

The easiest way to put the current date in the Date field is to hold down the Command key and press the hyphen key. This enters the date in the Macintosh internal calendar into that field.

# **Changing Field Sizes**

After entering information for a few items, you can see that some of the fields are much larger than the information they contain. And some fields might look better if the information were centered. Formatting choices are largely personal taste; they're not required. But making fields that contain a small amount of information smaller makes sense because that way you can see more fields of information on the screen at once and, consequently, you have to do less horizontal scrolling.

Initial information for Cycles Unlimited is shown in Figure 5-3 without formatting changes.

Figure 5-3. The inventory datafile for Cycles Unlimited, without formatting

		inven	tory Log 📰		original of the second
_	Description	Cost	Sale	Order	
1	helmet - pro	\$32.50		order	Ini
2	helmet - pro	\$32.50		-	
3	gloves - cycling	\$6.88			
4	gloves - cycling	\$6.88			
5	fenders - rear	\$11.60			
6	fenders - rear	\$11.60			
		- 10			
16	pedals - black			-	- ~
17	pedals - pidck	\$6.75			
20/	201	\$6.75		888888888888888888	200000000000000000000000000000000000000
					(C)
			crolling		
•	File Edit For	n Organize	· ·		
					20
	Init	Quantity T	ory Log 📰		
1	3		otal Cost	Date	Locat
2	2	3	\$97.50	Jan 1, 1986	NWP
3	17		\$65.00	Jan 1, 1986	FW
4	25	17	\$116.96	Jan 1, 1986	NWP
5	9	25	\$172.00	Jan 1, 1986	FW
6	13	9	\$104.40	Jan 1, 1986	NWP
	1	13	\$150.80	Jan 1, 1986	FW
16					
16	16	16	\$108.00	Jan 1, 1986	IFW I
0/2	0K) 15	15	\$96.75	Jan 1 1986	NWP K
					3(2)
		scr	rolling		
	File Edit F	Organiza	U		
<b>é</b>	THE EUIL FORM	organize	and the same of the same		
*	File Edit Form	The second secon			
6		Invento	ry Log 🔙		
	Location	Invento	ry Log 🔣		K
1 1	Location IWP	Invento	ry Log <b>E</b>		Û
1 N 2 F	Location	Invento	ry Log <b>E</b>		Û
1 N 2 F 3 N	Location   WP   WP	Invento	ry Log <b>E</b>		Û
1 N 2 F 3 N 4 F	Location IWP W IWP	Invento	ry Log <b>E</b>		0
1 N 2 F 3 N 4 F	Location   WP   WP   WP   WP   WP   WP   WP   W	Invento	ry Log <b>E</b>		O O
1 N 2 F 3 N 4 F	Location IWP W IWP	Invento	ry Log		Û
1 N 2 F 3 N 4 F	Location IWP W IWP W W WP W WP	Invento	ry Log		0

These are the formatting changes I would make:

- Lengthen the Description field
- Shorten the Cost, Sale, Order, Init, Quantity, Date, and Location fields
- Center information in the Sale, Order, Init, and Location fields
- Change the Date field display format from the default display of medium to short

To lengthen the Description field:

□ Position the mouse pointer on the right border of the description field.

File's fields are anchored on the left side and grow and shrink from the right.

□ When the mouse pointer changes shape and looks like this:

*	File Edit Form	Organize				
		inven	tory Log		1.10	
	Description (+)	Cost	Sale	Order	Ini企	
1	helmet - pro	\$32.50			888	
2	helmet - pro	\$32.50				
3	gloves - cycling	\$6.88				<ul><li>Pointer</li></ul>
4	gloves - cycling	\$6.88				
5	fenders - rear	\$11.60				
6	fenders - rear	\$11.60				
			_			
116	pedals - black	\$6.75			7	
17	nedals - silver	\$6.45			ZĎ	
20/	/20			888888888888888888888888888888888888888	3564666666	

hold down the mouse button and drag the right edge of the field to the right about half an inch to lengthen the Description field. Release the mouse button.

ć	File Edit Form	Organize			
		Inventory		Order	
	Description	+ Cost	Sale	Druei	
1	helmet - pro	\$32.50			898
	helmet - pro	\$32.50			
	gloves - cycling	\$6.88			
4	gloves - cycling	\$6.88			
5	fenders - rear	\$11.60			
6	fenders - rear	\$11.60			
-					_
,				F	
116	pedals - black	\$6.75			1 0
17	nedals - silver	\$6.45			己的
20	pedals - black				8888 VI

To shorten the Cost, Sale, Order, Init, Quantity, Date, and Location fields:

□ Position the mouse pointer on the right border of the field you wish to shorten.

 $\hfill\square$  When the pointer changes shape and looks like this:

	Inventory L	og 🔙		***************************************
Description	Cost +	Sale	Order	T
1 helmet - pro	\$32.50		Order	+ P
2 helmet - pro	\$32.50			
3 gloves - cycling	\$6.88			
4 gloves - cucling	\$6.88			
5 fenders - rear	\$11.60			
6 fenders - rear	\$11.60			
16 pedals - black	\$6.75		-	1
17 hedals - silver	\$6.45			

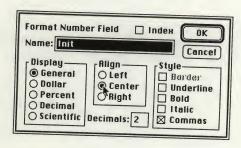
hold down the mouse button and drag the right edge of the field to the left. Release the mouse button.

====	Decemi-Ai	Invent	ory Log 📰		
-	Description	Cost ++	Sale	Order	Inik
-	helmet - pro	\$32.50			1111/2
2	helmet - pro	\$32.50			
3	gloves - cycling	\$6.88			
4	gloves - cucling	\$6.88			
5	fenders - rear	\$11.60			
6	fenders - rear	\$11.60			
		10	~		
16	pedals - black	\$6.75			
17	nedals - silver	\$6.45			

File assumes you want information left aligned in text fields and right aligned in number fields. You can change the default alignment for either type of field with the Format Field command from the Form menu.

To center information in the fields:

- □ Select the Init field by clicking in any record in the Init column.
- □ Choose Format Number Field... from the Form menu and click the Center button in the Align box.



☐ Then click OK.

É	F	ile	Edit	Form	Organize

Description	Cost	ntory Lo	Order	Init	Quantity
helmet - pro	\$32.50			3	3
helmet - pro	\$32.50			2	2
gloves - cycling	\$6.88			17	17
1 gloves - cycling	\$6.88			25	25
fenders - rear	\$11.60			9	9
fenders - rear	\$11.60			13	13
7 pump - floor	\$17.20	-		15	15
B pump - floor	\$17.20			8	12
9 pump - frame	\$14.24			12	12
o pump - frame	\$14.24			11	6
1 axle - front	\$22.90			6	8
2 axle - front	\$22.90			8	9
3 axle - rear	\$31.75			9	8
14 axle - rear	\$31.75		-		20
15 pedals - black	\$6.75		-	20	16
16 pedals - black	\$6.75		1	16	15
17 nedals - silver	\$6.45	100000000000000000000000000000000000000			

This will center information in that field for all the records in your datafile.

☐ Follow these steps to center information in the Sale, Order, Quantity, and Location fields.

File has three date formats for displaying dates: short (as in 3/26/85), medium (as in Mar 26, 1985), and long (as in March 26, 1985). Unless you tell it otherwise, File assumes you want dates displayed in medium format. To conserve screen space, change the date format from medium to short so you can shorten the Date field.

To change the date format:

- □ Select the Date field by clicking in the Date field of any of the records.
- □ Choose the Format Date Field... command from the Form menu.
- □ Click the Short button in the Display box. Then click OK.

With these formatting changes, your inventory log will look like the form shown in Figure 5-4.

# **Recording Transactions**

The next step is to use this inventory datafile to record actual transactions. At the end of each day or each week, depending on your volume of business, gather your sales receipts and invoices for the day or week and enter the information in your Inventory Log datafile. For instance, each store in Cycles Unlimited does 25 to 50 transactions a day. With that volume of business, Gus finds it easier to stay on top of his inventory system by entering transactions daily.

Figure 5-4. The inventory log form for Cycles Unlimited

	Description	Inve	entory L				
_	helmet - pro	Cost	Sale	Order	Init	Quantity	10
	hermet - pro	\$32.50			3	7	- "
_	helmet - pro	\$32.50			2	2	888
	gloves - cycling	\$6.88		<b>—</b>	17	_	_
	gloves - cycling	\$6.88		-		17	
Ī	fenders - rear	\$11.60			25	25	
	fenders - rear				9	9	
=	renders redi	\$11.60			13	13	-
7	pedals - black nedals - silver 20(2)	\$6.75 \$6.45			16 15	15	

			Inventory	Log		
	Init	Quantity	Total Cost	Date	Location	
-	3	3	\$97.50	1/2/86	NWP	
2	2	2	\$65.00	1/1/86	FW	
3	17	17	\$116.96	1/1/86	NWP	
4	25	25	\$172.00	1/1/86	FW	
5	9	9	\$104.40	1/1/86	NWP	
6	13	13	\$150.80	1/1/86	FW	
~	_					~
16	16	16	\$108.00	1/1/86	FW	_
17	15	15	\$96.75		NWP	

Enter transaction information the same way you entered information for your initial inventory.

To enter sales to customers:

□ Enter the appropriate information about each item sold in the Description, Cost, Sale, Date, and Location fields in the New record at the bottom of the datafile.

To enter orders received from suppliers:

□ When you receive orders, enter the appropriate information about each item received in the Description, Cost, Order, Date, and Location fields in the New record at the end of the datafile.

If the same item is received for both locations, you will have a separate entry for each location.

Your transaction records should look similar to the following records for Cycles Unlimited shown in Figure 5-5 on the next page.

Figure 5-5. Transaction records for Cycles Unlimited

é	File	Edit	Form	Organize
	rille	Eur	1 01111	0.90

Description	Inve	Sale	Order	Init	Quantity	
	\$6.75			20	20	
15 pedals - black	\$6.75			16	16	
16 pedals - black	\$6.45		-	15	15	
17 pedals - silver			-	21	21	
18 pedals - silver	\$6.45		-	16	16	
19 skinshorts	\$24.90		-	19	19	$\Box$
20 skinshorts	\$24.90		-	19	-2	
21 pump - floor	\$17.20	2			-2	
22 fenders - rear	\$11.60	2			-3	
23 pump - frame	\$14.24	3				$\vdash$
24 pump - frame	\$14.24	4			-4	$\vdash$
25 helmet - pro	\$32.50		3		3	$\vdash$
26 helmet - pro	\$32.50		4		4	$\perp$
	\$24.90	2			-2	$\perp$
	\$6.75	6			-6	Ш
	\$24.90	5			-5	
29 skinshorts	\$24.90	-	_			
New						

ecroll	

<b>★</b> File Edit Form Organiz	<b>é</b> (	ilo	Edit	Form	Organiza
---------------------------------	------------	-----	------	------	----------

ity	Total Cost		
	\$135.00	1/1/86	NWP
		1/1/86	FW
-		1/1/86	NWP
-	450	1/1/86	FW
-		1/1/86	NWP
		1/1/86	FW
		1/2/86	FW
	(\$23.20)	1/2/86	NWP
	(\$42.72)	1/2/86	NWP
			FW
			NWP
			FW
	(\$49.80)	1/2/86	FW
	(\$40.50)	1/2/86	NWP
5			NWP
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
		\$135.45 \$398.40 \$473.10 (\$34.40) (\$23.20) (\$42.72) (\$56.96) \$97.50 \$130.00 (\$49.80)	\$135.45 1/1/86 \$398.40 1/1/86 \$473.10 1/1/86 (\$34.40) 1/2/86 (\$23.20) 1/2/86 (\$42.72) 1/2/86 (\$56.96) 1/2/86 \$97.50 1/2/86 (\$49.80) 1/2/86 (\$49.80) 1/2/86

# **Generating Reports**

Entering daily or weekly transactions accurately is crucial to an inventory system. It takes a little effort, but the payoff comes when you generate reports that show exactly what you have in your inventory at each location. And that's what we'll do in this section—produce an inventory report that looks like the report shown in Figure 5-6.

Figure 5-6. Part of a sample inventory report for Cycles Unlimited

Description	Location	Cost	Quantity	Total Cost
axle - front	FW	\$22.90	8	\$183.20
	Total	l for FW:	8	\$183.20
		\$22.90	6	\$137.40
	Total	for NWP:	6	\$137.40
1	Total for axle	- front:	14	\$320.60
axie - rear	FW	\$31.75	8	\$254.00
	Total	for FW:	8	\$254.00
	NWP	\$31.75	9	\$285.75
	Total f	or NWP:	9	\$285.75
	Total for axle	- rear:	17	\$539.75
fenders - rear	FW		13	\$150.80
	Total	for FW:	13	\$150.80
	NWP	\$11.60	9	\$104.40
		\$11.60	-2	(\$23.20)
	Total fo	or NWP:	7	\$81.20
Tota	l for fenders	- rear:	20	\$232.00
gloves - cycling		\$6.88	25	\$172.00
	Total f	or FW:	25	\$172.00
	NWP		17	\$116.96
	Total for	r NWP:	17	\$116.96
Total f	or gloves - cį	jcling:	42	\$288.96
helmet - pro		\$32.50	2	\$65.00
		\$32.50	4	\$130.00
	Total fo	or FW:	6	\$195.00
	NWP	\$32.50	3	\$97.50

- Dage not shown .

Description	Location	Cost	Quantity	Total Cost
To	tal for pump	- frame:	16	\$227.8
skinshorts	FW	\$24.90	19	\$473.1
		\$24.90	-2	(\$49.80
	Total	for FW:	17	\$423.3
	NWP	\$24.90	16	\$398.4
		\$24.90	-5	(\$124.50
	Total f	or NWP:	11	\$273.90
	Total for skir	nshorts:	28	\$697.20
		-	Total:	\$3,492.25

#### **Sorting Information**

To make this inventory report, first sort your datafile so the records are in the order you want them in your report. Then open the Report window and specify the fields you want totaled. Then preview the report on the screen to make sure it shows the information you want. Then all you have to do is print the report on the printer.

To sort the inventory log into the order you want for your report:

☐ Choose the Sort... command from the Organize menu.

You'll see the sort window open on your screen.

				Init	Quantitu	1
Description		Sale	urder			-
	\$6.75					$\dashv$
	\$6.75					
nedals - silver	\$6.45					$\vdash$
nedals - silver	\$6.45			21	21	$\vdash$
		Sort				H
alijnahar						Н
II VOLT	Clear					$\vdash$
fenders Descri	ption	Cost	Sale	Order	Init	-
						-
WARRANCE TO THE REAL PROPERTY OF THE PARTY O	100	160			-	-
Participation of the Control of the				000000000000	REBERERSES EN CO.	-
					36000000	-
	\$24.90	2				-
	\$6.75	6				1
	\$24.90	5			-5	-
SKINSHOI CS	-	1				
	Description pedals - black pedals - black pedals - silver pedals - silver skinshor skinshor pump - f pump - f pump - f helmet helmet skinshorts pedals - black skinshorts	Description Cost pedals - black \$6.75 pedals - black \$6.75 pedals - silver \$6.45 pedals - silver \$6.45 skinshort pump - fenders Description	Description Cost Sale pedals - black \$6.75 pedals - black \$6.75 pedals - silver \$6.45 pedals - silver \$6.45 skinshor Sort Clear pump - fenders Description Cost pump - fenders Shippedals - black \$24.90 2 pedals - black \$6.75 6	peedals - black \$6.75 pedals - black \$6.75 pedals - black \$6.75 pedals - silver \$6.45 pedals - silver \$6.45 pedals - silver \$6.45 skinshof pump - fenders pump - fenders pump - fhelmet helmet skinshorts \$24.90 2 pedals - black \$6.75 6	Description   Cost   Sale   Order   Init	Description   Cost   Sale   Order   Init   Quantity

□ Click in the Description field.

Sort Clear				
Description	Cost	Sale	Order	Init
->Z				
->Z				

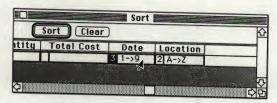
You'll see the number 1 appear in the small box on the left side of the field. This means the information in the datafile will be sorted by Description first. The A->Z appearing in the large box on the right means the text in the Description field will be sorted in ascending alphabetical order.

□ Scroll the Sort window to the right and click in the Location field.

	Sort Clear			
ity	Total Cost	Date	Location	_
			2 A->Z	
	4,755		₹/	

You'll see the number 2 appear in the small box on the left. The number 2 means that if two or more Description fields are the same, those fields will also be sorted by their Location fields. This is called a secondary sort. The A->Z in the large box on the right again means locations will be sorted alphabetically.

□ Click in the Date field.



You'll see the number 3 in the small box, indicating this is the third sort criterion, and 1->9 in the large box, indicating the dates will be sorted in ascending order. If you wish to sort in descending order, you simply click on the 1->9 and it changes to 9->1.

- □ Click the Sort button and File will sort the datafile as you've specified.
- □ Now open the report window by choosing Report... from the Organize menu.

	D	A->Z	1->9	Not Sorte	ed
Heading Field	Description	Location	Date	Cost	Sale
by Date	Description	Location	Date	Cost	Sale
by Location					
by Descrip				-	
Grand				1	

Notice that the sorted fields appear to the left of the double vertical line, in what is called the Sort area, and the rest of the fields are to the right of the double vertical line in the Not Sorted area. It is possible to sort in the report window by dragging fields from the Not Sorted area into the Sort area, but you may find it easier to accomplish the same thing by choosing the Sort... command from the report window and then choosing New Report.

## **Excluding Fields from the Report**

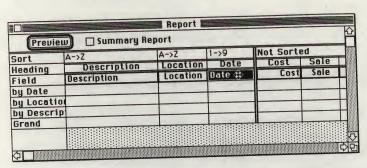
If you scroll the report window all the way to the right, you'll see another double vertical line marking an area called the Not Shown area.

□ Scroll the report window by dragging the scroll box at the bottom of the report window all the way to the right.

Preview	] ☐ Sumπ	nary Report
Sort		Not Shown
Heading	otal Cost	
Field	Total Cost	
by Date		
by Location		
by Descrip		
Grand		

This is the place to drag fields you don't want printed in your report. The fields you don't want in your report are Date, Sale, Order, and Init. To move those fields into the Not Shown area, select all of them and then drag them all at once into the Not Shown area.

- □ Scroll the report window all the way to the left.
- Click on the Date field in the Field row (the field immediately below the Date heading) to select it.



□ Hold down the Shift key and click on the Sale field to select it, too. Continue holding down Shift and click on Order and then Init to select them, as well. Release the Shift key.

ort			1		M
leading	Order	Init	Quantity	Total Cost	Not Shown
ield	Order	ldit	Quantity	Total Cost	
y Date				10(01 (05)	
y Location	- 1				-
y Descrip					
rand					
			310111111111111	100000000000000000000000000000000000000	4

- □ Now with the mouse pointer on any one of the selected fields, hold the mouse button down and drag all of the fields to the right until the vertical line that appears as you start to drag is in the Not Shown area.
- □ Release the mouse button.

Sort		Not Show	'n			
Heading	Cost	Date	Sale	Order	Init	
Field	tal Cost	Date	Sale	Order	lgật	
by Locatio						
by Descrip						
Grand						

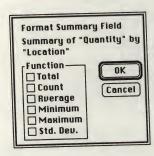
# **Specifying Totals for a Report**

Next you need to tell File which totals you want in your report. In the Quantity column, you want a total by description and a total by location.

- $\hfill \square$  Scroll left until the Not Sorted area is visible in the report window.
- □ Click in the Quantity column and the by Location row.

Sort	Not Sorte	ed		Not Show	(D	-
Heading	Cost	Quantity	Total Cost	Date	Sale	Or
Field	Cost	Quantity	Total Cost		Sale	Or
by Location		_ 1			vale	U
by Descrip		7				-
Grand						-
					-1-1-1-1-1-1-1-1	

- $\hfill\Box$  Choose Format Summary Field . . . from the Form menu.
- ☐ You'll see a dialog box that looks like this:



□ Click in the Total box and click OK.

Preview	Int-A Comto	d		Not Show	n	
301 0	Not Sorte	Quantity	Total Cost	Date	Sale	Ord
Heading	Cost		Total Cost	Date	Sale	Ord
Field	Lost	Quantity	TOTAL COOL			
by Location	-	Total		8		
by Descrip				1	-	
Grand					100000000000000000000000000000000000000	

Note that the word Total appears in the box to show that the Quantity field will be totaled by Location on the report.

□ Follow these steps to specify totals for Quantity by Description and Total Cost by Location, and by Description. You'll also need a Grand total for Total Cost.

After you've finished specifying totals, your report window should look like this:

Heading Cost Quantity Total Cost Date Sale Original Cost Quantity Total Cost Date Sale Original Cost	Preview	9	nary Repor		Not Show	n	
Field Cost Quantity Total Cost Date Sale United Date Sale United Date Sale United Date Date Date Date Date Date Date Date	Sort		Duantitu	Total Cost	Date		Ord
by Location Total Total by Descrip Total Total Total				Total Cost	Date	Sale	Ord
by Descrip Total Total		-		Total	1	-	
			Total	Total			-
Grand	Grand			Total	1	**********	1

#### **Previewing and Printing a Report**

That's all there is to setting up an inventory report. Now you're ready to print. You could just choose the Print Report... command and print your report without further delay. But it's a good idea to preview it first to make sure that it's what you want.

- □ Click the Preview button to look at the report.
- ☐ If it's what you want, click the Done button, then choose Print Report... from the File menu. If you want to change any of the printing parameters, do so in the dialog box that appears. Click OK.

The report is sent to the printer. If you'd like different information in this report (for example, the date of each transaction), make the changes you want in the report window and preview it again. When you get exactly what you want, print it.

This inventory system was designed to be small enough so that six months of inventory information will fit on one disk. Each time you print this report, you'll get a cumulative listing of all inventory activity from the beginning of the six-month period to the present. If you want a shorter report (for example, just the subtotals of each part at each store location) click in the Summary Report box at the top of the Report window. Then click the Preview button. If you printed this report now, it would look like the report shown in Figure 5-7.

If you have a large inventory and are annoyed by the amount of time it takes to print an entire report, you may elect to print only the summary report rather than the entire report.

Now save this report under its own name so that when you want to print a report of your inventory activity, all you need to do is open the report window, choose Open Report... from the File menu, and double-click on the name of the report.

To save the report:

- □ Choose Save Report As... from the File menu.
- □ Type Inventory Activity as the name of your report, then click the Save button or press Return.

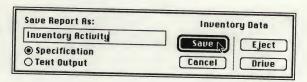


Figure 5-7. A cumulative inventory report

Description	Location	Quantity	Total Cost
xle - front	FW	8	\$183.20
xle - front	NWP	6	\$137.40
Total for a	xle - front:	14	\$320.60
xle - rear	FW	8	\$254.00
xle - rear	NWP	9	\$285.75
Total for	axle - rear:	17	\$539.75
enders - rear	FW	13	\$150.80
enders - rear	NWP	7	\$81.20
Total for fer	nders - rear:	20	\$232.00
gloves - cycling	FW	25	\$172.00
gloves - cycling	NWP	17	\$116.96
Total for glov	es - cycling:	42	\$288.96
helmet - pro	FW	6	\$195.00
nelmet - pro	NWP	6	\$195.00
Total for I	elmet - pro:	12	\$390.00
pedals - black	FW	16	\$108.00
pedals - black	NWP	14	\$94.50
Total for pe	dals - black:	30	\$202.50
pedals - silver	FW	21	\$135.45
pedals - silver	NWP	15	\$96.75
Total for per	ials - silver:	36	\$232.20
pump - floor	FW -	6	\$103.20
pump - floor	NWP	15	\$258.00
Total for	pump - floor:	21	\$361.20
pump - frame	FW	7	\$99.68
pump - frame	NWP	9	\$128.16
Total for p	ump - frame:	16	\$227.84
skinshorts	FW	17	\$423.30
skinshorts	NWP	11	\$273.90

DescriptionLocationQuantityTotal CostTotal for skinshorts:28\$697.20Total: \$3,492.25

continued -

# **Keeping an Inventory History**

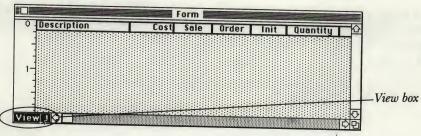
It's a good idea to keep an inventory history log on a separate disk with only monthly summary information. That way, if anything happens to your working inventory log for the month, you'll have summary inventory totals for each item on a separate disk, and you'll have lost only the current month's data. Also, after you've accumulated several months of data, you can run reports that will give you information about items in your inventory over time.

To make an inventory history, first set up a summary report that shows the total number of each item in stock at both locations and the total dollar value of the inventory at each location. Then save this summary report as text (no form)—just the information contained in the datafile—in a datafile called January (or the name of the current month) Totals. Next, make a new datafile called Inventory Master with just five fields: Location, Description, Quantity, Total Cost, and Month, and merge January Totals into that datafile. The next month (and each successive month) do the same thing: Copy the summary report into a datafile called February Totals, then copy that information into Inventory Master. What you'll get is one datafile with ending totals for each month that you can use to see how the value of your inventory changes from month to month and perhaps where you need to make some changes to stabilize it by eliminating products that don't sell and making sure to order enough of your best-selling items.

#### **Setting Up a Summary Report**

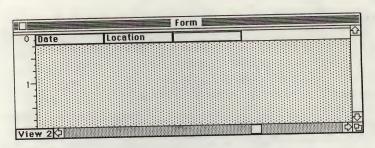
To create a summary report, first make a new field called Month so you can identify items in the history by month.

- □ Choose Show Form from the Form menu.
- □ Click in the View 1 box in the lower left corner of the screen to change to View 2.



Note that fields return to their default sizes. Since you're only using this form to set up a summary report, you don't have to worry about it.

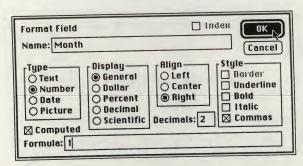
□ Drag the horizontal scroll box about two-thirds of the way to the right along the scroll bar so that the empty field box (i.e., the field immediately to the right of the Location field) is visible.



- □ Click in the empty box to get an insertion point.
- □ Type Month, press Return, press N (for Number) and press Return.

Next add a constant value in the Formula box. To do this, you format the Month field as a computed number field and get the month number in each of the records without having to enter it manually.

- □ Double-click on the Month field, click in the Computed box and click to get an insertion point in the Formula typing field.
- □ If the month is January, enter a 1 and click OK or press Return.



This automatically puts that number in the Month field of each record. You can replace the 1 each month with the current month number (for instance, October would be 10).

- $\hfill\square$  Now close the form window by clicking the form window close box.
- □ If the report window isn't already open, choose Report... from the Organize menu.
- □ Click the Summary Report box.

To make Location the primary sort:

- $\hfill\Box$  Scroll the report window all the way to the left.
- □ Drag the Location field to the left until the vertical line that appears as you start to drag is on the left side of the Description field. Release the mouse button.

Sort	A->Z	A->Z	Not Sort	ed	
Heading	Location	Description	Cost	Quantity	Total
Field		Description	Cost		Total
by Descri				Total	Total
by Locati	01			Total	Total
Grand					Total

To add Month to the report:

- □ Scroll the report window all the way to the right.
- □ Drag the Month field to the left from the Not Shown area into the Not Sorted area until the vertical line that appears as you start to drag is on the right side of the Total Cost field. Release the mouse button.

Preview	,	mary Repo			
	Not Sort				Not Sho
Heading	Cost	Quantity	Total Cost	Month	Date
Field	Cost	Quantity	Total Cost	Month	
by Descrip		Total	Total		Date
by Location		Total	Total		<del></del>
Grand			Total		-

One last step before saving this report is to delete the Grand total in the Total Cost column because you don't need a grand total for Total Cost, then add File's built-in Average function in the Month column. Since all your records contain the same number in the Month field, printing the average will print the month number.

□ Click on the Total Cost column and the Grand row.

Sort	Not Sort	ed			Not Sh
Heading	Cost	Quantity	Total Cost	Month	Date
Field	Cost	Quantity	Total Cost	Month	
by Descrip		Total	Total	1101111	Date
by Location		Total	Total		-
Grand			Total 4		-

□ Press the Backspace key. This removes any summary formatting applied to that field.

You'll still get totals for each item, just not a Grand total. There is no need for a Grand total in your inventory history.

In order to get the Month number field in your summary report and subsequently in your inventory history, you have to format the By Description summary field for Month by choosing the Average function.

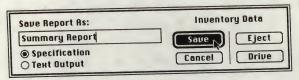
- □ Double-click in the Month column in the By Description row.
- □ Click the Average box and click OK.

Your report window should look like this:

Preview		mary Repor			Not Sho
Sort Heading	Not Sorte	Quantity	Total Cost	Month	Date
Field	Cost	Quantity	Total Cost		Date
by Descrip		Total	Total	Average	
by Location		Total	Total		
Grand					
Grand					

The next step is to save this report under its own name so you won't have to re-create it each time you want to create a file with your current month's inventory summary information, which you transfer to your Inventory Master datafile.

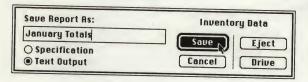
- □ Choose Save Report As... from the File menu.
- □ Type *Summary Report* as the name of the report, then click the Save button or press Return.



Now save only the information contained in this report (with the title January Totals, so you know exactly what it is), by again choosing the Save Report As... command from the File menu. The dialog box that appears when you choose Save Report As... offers a choice between two options: Specification and Text Output. Specification, the default option you used to save Summary Report, saves the report and its form; Text Output saves only the text (or information) contained in the report and not the form. This time you want to use the Text Output option because you want your Summary Report information saved

in text-only form so you can copy it into another datafile or load it into a word-processing program, such as Microsoft Word. In this case, you want to use it with your Inventory Master datafile. Here are the steps to do this:

- ☐ Choose Save Report As... from the File menu.
- □ Type January Totals in the Save Report As typing field.
- □ Click the Text Output button and click the Save button to save a text file called January Totals.

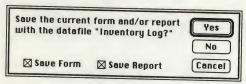


### **Creating An Inventory Master Datafile**

Now you can leave the report window and open a new datafile for the inventory master.

- □ Click anywhere in the datafile window.
- ☐ Choose New Datafile... from the File menu.

You'll see the following dialog box asking if you want to save both the current form (View 2) and current report (Summary Totals) with your inventory datafile:



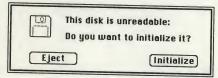
Note that both boxes (Save Form and Save Report) are checked, indicating that File will save both the current form and report if you click the Yes button.

- □ Click on the X in front of Save Report to remove the X so File won't save the current report with the datafile, then click the Yes button.
- □ When File asks for a name for the new datafile, type *Inventory Master*.

You want to save this datafile on a separate disk. To do this:

□ Click the Eject button and insert a blank disk.

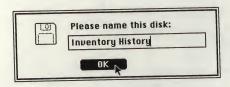
If the disk hasn't been initialized, you'll see this dialog box:



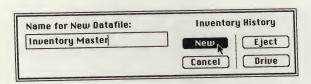
□ Click Initialize.

After the disk has been initialized, you'll be asked to name the disk.

□ Type Inventory History and click OK or press Return.



- □ Type Inventory Master as the name of the new datafile.
- □ Click the New button.



□ In the form window of the new datafile, enter the following fields (these are the fields you used in the Inventory Log summary report):

Field Name	Information Type
Location	Text
Description	Text
Quantity	Number
Total Cost	Number
Month	Number

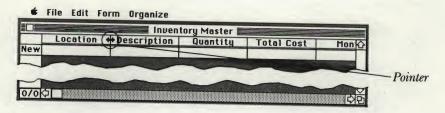
Now you need to format these fields so that when you bring the monthly summary information into the datafile, the data will be displayed in the proper format and the columns will be the correct width. Since we're using only five fields in our example, you must adjust the field widths so that all five fields will fit within the width of the screen. That way, you can see all of the information and you won't have to do any horizontal scrolling.

□ Click anywhere in the datafile window to make it active.

Since you're using a List Helper form, you can adjust field widths in the datafile window as well as the form window.

☐ Move the mouse pointer to the right side of the Location field.

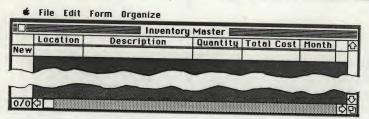
□ When the mouse pointer looks like this:



hold down the mouse button and drag the field about a quarter of an inch to the left. Release the mouse button.

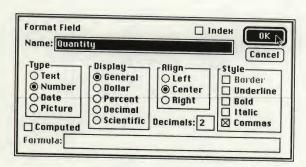


Size the rest of the fields so that your datafile window looks like this:



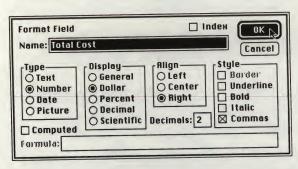
Next, format the Quantity field so the numbers that will be displayed in that field are centered.

- □ Click in the field under Quantity in the New record.
- □ Choose Format Number Field... from the Form menu.
- □ Click in front of Center in the Align list box, then click the OK button.



Finally, format the Total Cost field for dollar display because File doesn't transfer formatting information with text-only files.

- □ Click in the field under Total Cost in the New record.
- □ Choose Format Number Field... from the Form menu.
- □ Click in front of Dollar in the display box, then click the OK button.



What you need to do now is copy the January Totals text file into the Inventory History file. To do this:

□ Select the New record.



- $\hfill\Box$  Choose Open Datafile... from the File menu.
- □ Click on the Eject button and insert your inventory data disk.
- □ Double-click on January Totals.
- □ Follow the Mac's prompts to swap disks.

In a few seconds, January Totals is copied into your Inventory Master datafile.

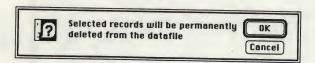
			ry Master 📰			
	Location	Description	Quantity	Total Cost	Month	K
1	Location	Description	*ERROR!	#ERROR!		Ť
2			#ERROR!	#ERROR!		-
3	FW	axle - front	8	\$183.20	1	-
4	FW	axle - rear	8	\$254.00	- 1	-
5	FW	fenders - rear	13	\$150.80	1	-
6	FW	gloves - cycling	25	\$172.00	1	-
7	FW	helmet - pro	6	\$195.00	1	-
8	FW	pedals - black	16	\$108.00	1	-
9	FW	pedals - silver	21	\$135.45	1	-
10	FW	pump - floor	6	\$103.20	- 1	-
11	FW	pump - frame	7	\$99.68	- !	-
12	FW	skinshorts	17	\$423.30	- 1	-
13			*ERROR!	#ERROR!	tEDDOD!	-
14	Total for F	127	1,824.63	ERRUR!	EKKUK!	-
15			1,024.03			-
16	NWP	axle - front	6	\$137.40	-	-
		ayle - rear	0	\$285.75	- 1	-55

#### Deleting fields containing error messages

Don't be disturbed by the #ERROR! information in a few records. File literally copies all the information from the Inventory Log summary text-output report (including report headings), and when it finds something it doesn't know what to do with, such as text in a field formatted for a number, it prints the not-so-friendly message #ERROR!. Because you have all the information you want and have no "real" errors, you can just delete the records or fields with the #ERROR! messages and your datafile will be just what you want.

To eliminate error messages:

- Select the first two records by dragging across the first two record numbers.
- □ Press the Backspace key.



File warns you that these records will be permanently deleted from your datafile. If you want to delete records and not get the warning message, hold down the Command key and the Option key and press the Backspace key.

□ Click the OK button.

Follow these steps for all records with the #ERROR! message or records that are blank.

Your screen now looks like this:

é	File	Edit	Form	Organize

	Location	Description	ry Master <b>E</b> Quantity	Total Cost	Month	
1	FW	axle - front	8	\$183.20	1	
	FW	axle - rear	8	\$254.00	1	
_	FW	fenders - rear	13	\$150.80	1	
_	FW	gloves - cycling	25	\$172.00	1	
	FW	helmet - pro	6	\$195.00	1	
6	FW	pedals - black	16	\$108.00	1	
7	FW	pedals - silver	21	\$135.45	1	
8	FW	pump - floor	6	\$103.20	1	
9	FW	pump - frame	7	\$99.68	1	
_	FW	skinshorts	17	\$423.30	1	
11	Total for F		1,824.63			
12	NWP	axle - front	6	\$137.40	1	
	NWP	axle - rear	9	\$285.75	1	
	NWP	fenders - rear	7	\$81.20	1	
	NWP	gloves - cycling	17	\$116.96	1	
	NWP	helmet - pro	6	\$195.00	1	
	NWP	nedals - black	14	\$9450	0.0000000000000000000000000000000000000	-

Note that the report totals (contained in record 11 in our example) were copied into the wrong fields. This is because File aligns summary information under the field it is summarizing, and when a report is saved as text-only, all the summary information alignment is lost and is brought into the fields left-aligned. To correct this, you need to manually transfer information into the proper fields.

- □ Click an insertion point in the Total Cost field of the summary record (in our example, record 11).
- □ Type the contents of the preceding field (in our example, *1,824.63*), then hold down the Shift key and press Return to move to the previous field.

**★** File Edit Form Organize

	Location	Description	y Master <b>U</b> Quantity	Total Cost	Month	
1	FW	axle - front	8	\$183.20	1	
2	FW	axle - rear	8	\$254.00	1	
3	FW	fenders - rear	13	\$150.80	1	
4	FW	gloves - cycling -	25	\$172.00	1	
5	FW	helmet - pro	6	\$195.00	1	
6	FW	pedals - black	16	\$108.00	1	
7	FW	pedals - silver	21	\$135.45	1	
8	FW	pump - floor	6	\$103.20	1	
9	FW	pump - frame	7	\$99.68	1	
	FW	skinshorts	17	\$423.30	1	
	Total for F		1,824.63	\$1,824.63		
	NWP	axle - front	6	\$137.40	1	
	NWP	axle - rear	9	\$285.75	1	
	NWP	fenders - rear	7	\$81.20	1	
-	NWP	gloves - cycling	17	\$116.96	1	
	NWP	helmet - pro	6	\$195.00	1	
	NWP	nedals - black	14	\$94.50	1	IS

Don't type a dollar sign; this field is already formatted for dollar display.

Now the total for all the January Total Cost values for the FreeWheeler location is in the correct field, and is displayed in the correct format. The next field you need to enter information into is already highlighted.

□ Type the contents of the previous field (in our example, 127), then hold down the Shift key and press Return.

	É	File	Edit	Form	Organize
--	---	------	------	------	----------

		Invento	ry Master			
-	Location		Quantity	Total Cost	Month	
1	FW	axle - front	8	\$183.20	1	-
2	FW	axle - rear	8	\$254.00	1	-
3	FW	fenders - rear	13	\$150.80	- !	
4	FW	gloves - cycling	25	\$172.00	- !	_
5	FW	helmet - pro	6		- 1	_
6	FW	pedals - black		\$195.00	1	
7	FW	pedals - silver	16	\$108.00	1	
8	FW		21	\$135.45	1	
		pump - floor	6	\$103.20	1	
9	FW	pump – frame	7	\$99.68	1	П
10	FW	skinshorts	17	\$423.30	1	-
11	Total for F	127	127	\$1,824.63		-
12	NWP	axle - front	6	\$137.40	-	$\dashv$
13	NWP	axle - rear	9	\$285.75	- !	
14	NWP	fenders - rear	7			
15	NWP	gloves - cycling	17	\$81.20	- 1	
_		helmet - pro		\$116.96	1	
_		nedals - black	6	\$195.00	1	
2/	221	IPHAIS - NIACK	14	\$94.50	1	

 $\Box$  Type the contents of the previous field (in our example, *Total for FW*), then hold down the Shift key and press Return.

**★** File Edit Form Organize

	Location		ry Master 🧱			
		Description	Quantity	Total Cost	Month	
	FW	axle - front	8	\$183.20	1	_
2	FW	axle - rear	8	\$254.00	1	_
3	FW	fenders - rear	13	\$150.80	- 1	_
4	FW	gloves - cycling	25	\$172.00	- !	_
5	FW	helmet - pro	6	\$195.00	- !	
6	FW	pedals - black	16	\$193.00	- 1	_
7	FW	pedals - silver	21	\$135.45	-	_
8	FW	pump - floor	6	\$103.20	- !	_
9	FW	pump - frame	7	\$99.68	- 1	_
10	FW	skinshorts	17	\$423.30	- !	_
11	Total for F	Total for FW	127	\$1,824.63	1	
12	NWP	axle - front	6	\$1,024.03		
13	NWP	axle - rear	9		1	_
14	NWP	fenders - rear	7	\$285.75	1	
15	NWP	gloves - cycling	17	\$81.20	1	
6	NWP	helmet - pro	6	\$116.96	- 1	
	NWP	nedals - black	14	\$195.00	1	
2/	221			\$9450	100000000000000000000000000000000000000	_

If you can't see the contents of the Location field to type it, simply position the mouse pointer on it and drag to the right to scroll the text in it. Then double-click in the Description field, type the information in, and press Shift-Return.

For the first field in the record (Location), all you need to do is delete the contents.

 $\hfill\square$  Since the field is already highlighted, just press the Backspace key.

-			Master 📰			
	Location	Description	Quantity	Total Cost	Month	_
1	FW	axle - front	8	\$183.20	1	_
2	FW	axle - rear	8	\$254.00	1	
3	FW	fenders - rear	13	\$150.80	11	
_	FW	gloves - cycling	25	\$172.00	1	
	FW	helmet - pro	6	\$195.00	1	
	FW	pedals - black	16	\$108.00	1	
_	FW	pedals - silver	21	\$135.45	1	
8	FW	pump - floor	6	\$103.20	1	
	FW	pump - frame	7	\$99.68	1	
_	FW	skinshorts	17	\$423.30	1	
11	111	Total for FW	127	\$1,824.63		
• •	NWP	axle - front	6	\$137.40	1	
	NWP	axle - rear	9	\$285.75	1	
	NWP	fenders - rear	7	\$81.20	1	
	NWP	gloves - cycling	17	\$116.96	1	
-	NWP	helmet - pro	6	\$195.00	1	
10	NWP	nedals - hlack	14	\$9450	1	

Now the FW totals are in the correct columns.

The last step is to add the current month number in the Month field of the Total row, so that these totals can be identified as the totals for month 1.

□ Press the Return key four times.

**★** File Edit Form Organize

□ Type 1, the current month, and press Return.

Your screen now looks like this:

		Invento	ry Master 📰			-
	Location	Description	Quantity	Total Cost	Month	Ŷ
1	FW	axle - front	8	\$183.20	1	- 828
2	FW	axle - rear	8	\$254.00	1	_
3	FW	fenders - rear	13	\$150.80	1	_
4	FW	gloves - cycling	25	, \$172.00	1	
5	FW	helmet - pro	6	\$195.00	1	
6	FW	pedals - black	16	\$108.00	1	
-	FW	pedals - silver	21	\$135.45	1	
<del>_</del>		pump - floor	6	\$103.20	1	
8	FW	pump - frame	7	\$99.68	1	
9	FW	skinshorts	17	\$423.30	1	
10	FW	Total for FW	127	\$1,824.63	1	
11			6	\$137.40	1	
	NWP	axle - front	9	\$285.75	1	7
13	NWP	axle - rear	7	\$81.20	1	$\dashv$
14		fenders - rear	17	\$116.96	1	-
15	NWP	gloves - cycling	17	\$195.00	1	$\dashv$
16	NWP	helmet - pro	6	\$195.00	-	_

□ Scroll the datafile window down and repeat the above steps for the NWP totals, which are in record 22.

When you're done, your datafile window should look like this:

-	Location	Description	y Master Waster Quantity	Total Cost	Month	k
12	NWP	axle - front	6	\$137.40	1	
13	NWP	axle - rear	9	\$285.75	1	-
14	NWP	fenders - rear	7	\$81.20	- 1	-
15	NWP	gloves - cycling	17	\$116.96	1	-
16	NWP	helmet - pro	6	\$195.00	1	-
17	NWP	pedals - black	14	\$94.50	1	-
18	NWP	pedals - silver	15	\$96.75	1	-
19	NWP	pump - floor	15	\$258.00	1	-4
20	NWP	pump - frame	9	\$128.16	- 1	٠,
21	NWP	skinshorts	11	\$273.90	1	-
22		Total for NWP	109	\$1,667.62	1	-
New			103	\$1,007.02		-
			4.7			

# **Adding Information for a Subsequent Month**

At the end of the next month, to add February's data to the master:

- ☐ In your Inventory Log datafile hold down the Command key and press T to toggle to the view 2 form (if necessary).
- Click in the Month field, choose Format Number Field... from the Form menu and type the current month in the Formula typing field.
- □ Open the report window, choose Open Report... from the File menu and double-click on Summary Report.
- □ Choose Save Report As... from the File menu, type *February Totals*, click the Text Output button, then click OK.
- □ Open the datafile Inventory Master.
- □ Select the New record in the datafile window.

Inventory Master   Location   Description   Quantity   Total Cost   Month								
4.7	The state of the s		Quantity	Total Cost	Month			
17	NWP	pedals - black	14	\$94.50	1			
18	NWP	pedals - silver	15	\$96.75	1			
19	NWP	pump - floor	15	\$258.00	- 1			
20	NWP	pump - frame	9	\$128.16	1			
21	NWP	skinshorts	11	\$273.90	1			
22		Total for NWP	109	\$1,667.62	- 1			
Ŧĸ			.00	₩1,007.0Z				

- □ Choose Open Datafile... from the File menu, double-click on the February Totals text file and it will be copied into the Inventory History datafile, starting at the New record.
- □ Delete any records with the = ERROR! fields and move the totals into the proper fields.

Each month follow these steps and your master inventory datafile will be up-to-date.

# **Using an Inventory History**

When your Inventory Master datafile has accumulated six months to a year of inventory information, you'll be able to create and print some interesting reports. You could find each of the clothing items in your inventory (such as shirts, skinshorts, gloves, hats, and helmets) and look at how stock has changed over time. You could look for seasonal changes or changes in trends. The information is available in your Inventory Master datafile; you need to decide what would be useful and then design a report to show what you need.

# **Maintaining Your Inventory**

To maintain your inventory, you need to know how to add new items, how to delete an item you no longer stock, and how to begin a new inventory datafile after six months or when your current inventory disk is full. Even if you have a small inventory and a hard disk drive capable of holding years' worth of information, it may be a good idea to start a new datafile every six months. The primary reason is that sorting and finding records in a large datafile to produce totals or add new information is time-consuming. When you start a new Inventory Log datafile, copy in the current totals and start with just your current inventory (no backlog of transactions).

#### Adding an item

You can add a new item to the inventory log at any point. Simply enter the information in the New record and the initial quantity received in the Init field rather than in the Order field. Then if you ever want to see every item in the inventory listed just once, you can use the Find... command to have File find every record whose Init value is >=1. File will display only the records for the initial inventory (in effect, each item in your inventory listed just once), not records for sales and orders, since you don't enter any values in the Init field for sales and orders.

## Deleting an item

To delete an item from the inventory, after you've found all items in your inventory (records whose Init value is >=1) mark the item you want to delete by clicking an insertion point and typing DEL- at the beginning of the item in the

Description field for that entry. For example, if you wanted to eliminate skin-shorts from your inventory, skinshorts would become DEL-skinshorts. Then when you start a new six-month datafile, find the records whose Description field = DEL-\* (that finds all descriptions beginning with DEL-) and delete them from the inventory log you'll use for the next six months.

#### Starting a new six-month log

At the end of six months when you're ready to start a new inventory log, first you need to print a summary report from your Inventory Master datafile so you have current totals for each item at each location in your inventory that you can manually copy into the new inventory log. Then you make a copy of your old Inventory Log datafile and name it Jan-June '85. Next, load the Inventory Log datafile, find all records whose Init value is >=1 so you can make a copy of the description and price for each inventory item at each location. That way, you won't have to type in this information. Then add current totals from your latest Inventory Master summary report by hand from the printed summary report of the old Inventory Master, and you're ready to start adding transactions for the next six months.

These steps might seem a bit cumbersome, but you only need to do them once every six months and File is a major improvement over a manual system. Here's what to do:

- □ With the Inventory Master datafile open, first choose Report... from the Organize menu and then click in the Summary Report box to set up the summary report for the old Inventory Master datafile.
- □ Choose Print Report... from the File menu, change any printing options you might want to change in the Print dialog box, and then click OK.

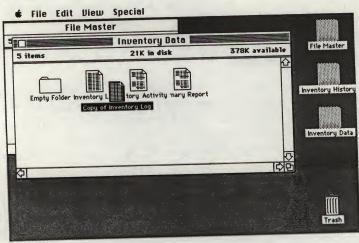
As soon as you have a paper copy of the totals you'll manually enter later in the new inventory log, you're ready to proceed.

□ Choose Quit from the File menu.

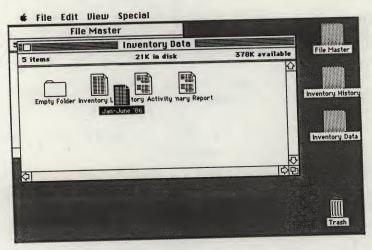
Now you're back at the Macintosh desktop. To make a copy of the Inventory Log datafile:

- □ Eject the Inventory History disk and insert your Inventory Data disk.
- $\hfill\Box$  If necessary, double-click on the Inventory Data disk icon to open the window.
- $\hfill\Box$  Click on the Inventory Log icon to select it.
- ☐ Choose Duplicate from the File menu.

In a few seconds you'll have a new icon on your Macintosh desktop called Copy of Inventory Log.



□ Since the copy icon is already highlighted, you can rename Copy of Inventory Log by simply typing Jan-June'86 and pressing Return.

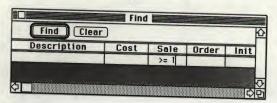


To set up the Inventory Log datafile for the next six months, you need to first find all the sales transactions and delete them. Then find all the order transactions and delete them, too. This will leave you with exactly what you want: your initial inventory for the current period. You can add current totals by typing them off the old Inventory Master and use this new datafile as a starting point for the next six months.

- $\hfill\square$  Double-click on the Inventory Log icon to load it.
- □ If the records are displayed in the view 2 form, hold down the Command key and press T to toggle to view 1.

To delete sales transactions:

- □ Choose Find... from the Organize menu.
- □ If necessary, click the Clear button to remove previous search criteria.
- $\Box$  Click an insertion point and type  $\geq = 1$  in the Sale column.



This will find all the sales transactions from the last six-month period in the inventory so that you can delete them from the Inventory Log and add current transactions.

□ Click the Find button.

Now to delete these records:

- □ Click on one of the record numbers to select a record.
- □ Choose Select All from the Edit menu to select all of the records.
- $\hfill\Box$  Choose Clear from the Edit menu or press the Backspace key.

You'll see a message that says, "Selected records will be permanently deleted from the datafile".

□ Click the OK button.

Follow the same steps to delete the order transactions:

- □ Choose Find... from the Organize menu.
- □ Click the Clear button.
- $\square$  Click an insertion point and type >= 1 in the Order column.



- Click the Find button.
- $\hfill\Box$  Click on one of the record numbers to select a record.
- □ Choose Select All from the Edit menu to select all of the records.

- □ Choose Clear from the Edit menu or press the Backspace key.
- □ When the dialog box appears, click the OK button to delete order transactions from the previous period.

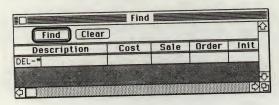
Now, in order to see that the records left in the inventory log are the Init transactions:

□ Choose Show All Records from the Organize menu.

# **Deleting items**

Now is the time to delete any items no longer in your inventory. These are items whose descriptions you marked with DEL-\*.

- □ Choose the Find... command from the Organize menu.
- □ Click the Clear button.
- $\square$  Type *DEL*-\* in the Description column.



□ Click the Find button.

Now delete these records just as you did the sales and order transactions.

- □ Click on one of the record numbers.
- □ Choose Select All from the Edit menu.
- □ Choose Clear from the Edit menu or press the Backspace key.
- □ Click the OK button when the dialog box appears.

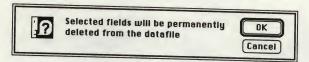
Next you need to clear the information from the Init and Date fields so you can enter totals by hand as easily as possible.

□ Choose Show Form from the Form menu.

The easiest way to do this is less than straightforward: Delete the two fields, then create and format them again. Otherwise you'd have to individually delete the Init and Date values in each record.

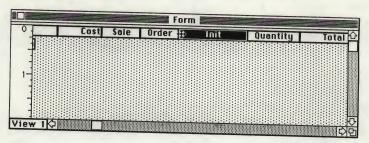
To delete the fields:

Click on the Init field in the form window to select it. Hold down the Shift key, scroll the window to the right and click on the Date field. □ Press the Backspace key.

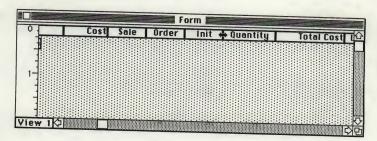


You'll see a message in a dialog box that says, "Selected fields will be permanently deleted from the datafile." You can click OK and not worry because you've just made a copy of your last six-month inventory.

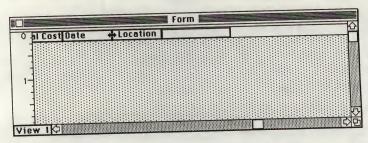
- □ Click in the new field just to the right of Location.
- □ Type Init, press Return, press N (for Number), and press Return.
- $\hfill\Box$  Type  ${\it Date}$  and press Return, press D (for Date), and press Return.
- □ Double-click on the Init field.
- □ When the dialog box appears, click the Center box in the Align box and click OK.
- □ Now drag the Init field back to its old spot, just before Quantity.



□ Position the mouse pointer on the right side of the Init field, then hold the mouse button down and drag the right edge of the field to the left until the Init field is the same size as the Sale and Order fields. Release the mouse button.

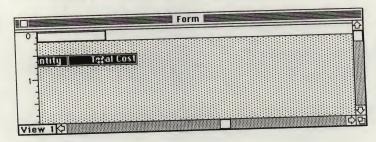


Scroll the form window to the right, then drag the Date field back to its old spot, just before the Location field. □ Position the mouse pointer on the right side of the Date field and drag it to the left approximately a quarter of an inch. Release the mouse button.



It will be easier to enter the totals manually from the Summary Report if you make a form that has only the fields you need (just hide the fields you don't need now) and if you sort the descriptions and locations in ascending order. That way, they'll be just like the report you'll be copying totals from.

- □ Choose Show All Records from the Organize menu.
- □ Choose Sort... from the Organize menu and click the Clear button to clear previous sort criteria. Make Description your first sort by clicking in the Description field first.
- □ Make Location your second sort by scrolling the window to the right, then clicking in the Location field next.
- □ Click the Sort button.
- □ Scroll the form window all the way to the left.
- □ Click on Cost, hold down the Shift key, and click on Sale, Order, Quantity, and Total Cost.
- □ Drag these fields down into the hide area.



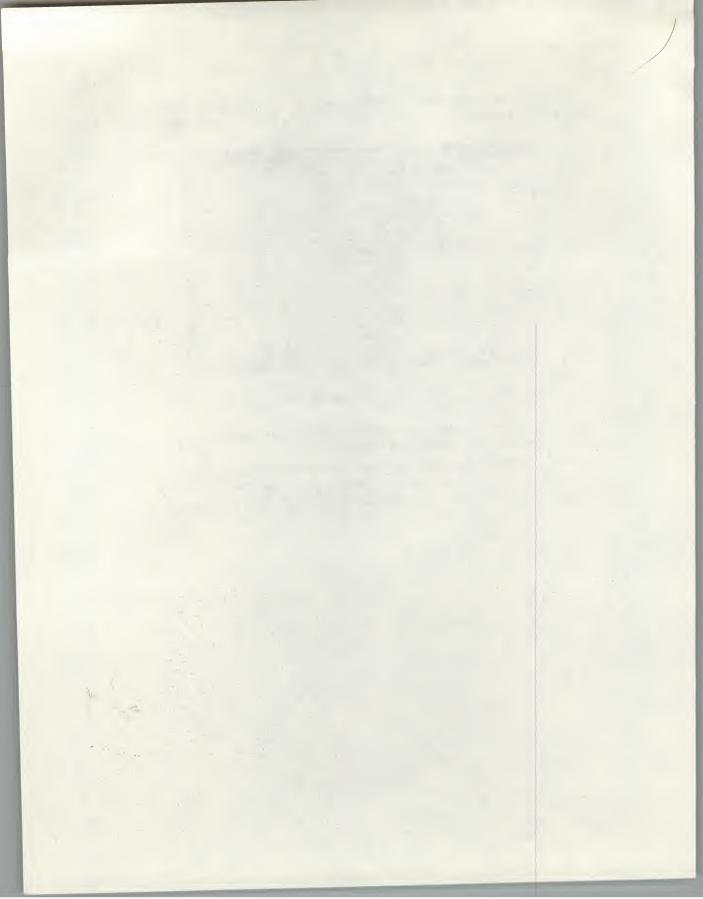
Now click in the datafile window and you'll see your new six-month inventory log ready for you to enter initial values and today's date for each item.

**★** File Edit Form Organize

	Daniel III	Inve	ntory Lo	g		
_	Description	Cost	Init	Date	Location	
1	axle - front	\$22.90			FW	
2	axle - front	\$22.90			NWP	
3	axle - rear	\$31.75			FW	
4	axle - rear	\$31.75			NWP	
5	fenders - rear	\$11.60				
6	fenders - rear	\$11.60			FW	
7	gloves - cycling	\$6.88			NWP	
8	gloves - cycling	\$6.88			FW	
9	helmet - pro	\$32.50			NWP	
	helmet - pro	\$32.50			FW	
	pedals - black	\$6.75			NWP	
	pedals - black	\$6.75			FW	
	pedals - silver				NWP	
	pedals - silver	\$6.45			FW	
		\$6.45			NWP	
	pump - floor	\$17.20			FW	
9	pump - floor	\$17.20			NWP	_
R/1	BK7	\$1424	000000000000000000000000000000000000000		FW	

- ☐ Use your paper summary report and enter the totals in the Init column for each item.
- Press the Return key to move to the Date field and enter today's date using the Command and hyphen keys.

When you've finished entering these values, you've finished your setup for another six months. And once again, you're ready to use the Inventory Log datafile to get accurate information about inventory levels and costs.





# **Ordering**

Now that you've constructed an inventory log and can get accurate information about what's in your inventory, it's time to put this information to work to help you order from your vendors. In this chapter, you'll see how to construct a datafile called Order Log that will contain current inventory totals, which you'll copy in from the Inventory Log datafile. You need to create two fields (Restock Level and Vendor Code) in this Order Log that will help you find items you need to reorder. For each item in your inventory, you enter the minimum number you want on hand at both locations in the Restock Level field. In each Vendor Code field, you enter a three-letter code identifying the vendor from whom you order that item. When it's time to reorder, you have File use the information in these two fields to automatically find all items you need to reorder from each vendor. This way you order exactly what you need—and you eliminate "hit and miss" ordering. Then, for each vendor, you print a separate order form containing only the items you buy from that vendor and File fills out the order forms for you.

In your Order Log datafile, you'll have only one record for each item in your inventory. (Each record will contain the current inventory level at each location, as well as the total for both locations.) This will make the Order Log considerably smaller than the Inventory Log. In fact, the Order Log will easily fit on one disk. The Order Log for Cycles Unlimited contains the following fields:

#### • Item

This field contains a picture of the stock item. With certain types of inventories, pictures can be really helpful in identifying parts. File has the capability to incorporate pictures created in a graphics program, such as MacPaint or

Microsoft Chart, or using a digitizer, such as the ThunderScan, as part of each record. In this chapter, you'll learn how to use the Order Log to do this.

• Part #

The Part # field is for the number code the vendor uses to identify the item.

- Description
- Cost

This field contains the price the vendor charges you for the item.

• NWP

This field contains the quantity on hand at one location (in our example, the Northwest Pedaler).

• FW

This field contains the quantity on hand at another location (in our example, the FreeWheeler).

• Total

This computed number field contains the sum of the current inventory levels at both locations (the NWP and FW fields) for each item.

• Restock Level

You use this field to indicate the minimum quantity you want to keep in stock for each item (the quantity for both locations).

• Restock Status

This computed number field subtracts the Total field from the Restock Level field. If the result is less than or equal to 0, it's time to reorder.

• QO\_NWP

If an item needs to be ordered, you use this field for the quantity you want to order for one location (in our example, the Northwest Pedaler).

• QO\_FW

If an item needs to be ordered, you use this field for the quantity you want to order for another location (in our example, the FreeWheeler).

• Total Order

The Total Order computed number field contains the sum of both QO\_NWP and QO\_FW.

• Total Cost

This computed number field multiplies the Cost and Total Order fields.

Date

This field contains the date of the order.

#### Vendor

This text field contains a three-letter descriptive code identifying the vendor you order that item from.

When you finish, your Order Log should look something like the Order Log for Cycles Unlimited shown in Figure 6-1.

After you complete the information in your Order Log, you can use the Find... command to locate all the records with values in the Restock Status field less than or equal to 0. The inventory items located in this way are the items you

Figure 6-1. A partial printout of the Order Log for Cycles Unlimited

B2BFP117	-
pump - frame Total: 16 Total Order: 14 Cost: C14 24 Restock S0 Total Cast   C14 24	
Cost: \$14.24 Restock 30 Total Cost   \$1.00.75	-
Level:	
Date: Jan 1, 1986 Restock Status: -14 Vendor: WBE	1
Part *: NVP: 9 00_NVP: 1	1
Description: FY: 8 00_FY: 2	1
axle - rear Total: 17 Total Order: 3	
\$31.75 Restock 20 Total Cost: \$95.25	1
Date: Jan 1 1086 Postarious	
Part 6. NO. 11	-
BP94078	
Dedals - black	
Cost: 10 lotal Order: 10	
\$6.75 Level: 40 Total Cost: \$67.50	
Date: Jan 1, 1986 Restock Status: -10 Vendor: [PB]	
33802-6 NVP: 17 QQ_NVP: 8	
Description: FV: 25 QO_FV:	
gloves - cycling Total: 42 Total Order: 8	
Cost:  16 88 Restock 50 Tatal Cost AFFO	
Level	
Verious: CAW	
79BFP068	
Description: FY: 6 QO_FY: 9	
Cost: 21 Total Order: 9	
\$17.20 Restock 30 Total Cost: \$154.80	

Figure 6-2. A printed purchase-order form for Cycles Unlimited

				CYCLES UNLIMITED MAIN OFFICE P.O. BOX 16288 SEATTLE, WA 98144		PURCHASE ORDER PACIFIC BIKES, INC. DATE: JANUARY 15, 1986 PD #: 20014		
	QUANTITY: N	(VP		PART *:	DESCRIPTION:	UNIT COST:		
1	3	11	2	SA42381	axle - rear	\$31.7		
2	4	4		BP94078	pedals - black	\$6.7		
3	4	4		SP94178	pedals - silver	\$6.4		
4	4	3	1	SA42281	axle - front	\$22.9	0 \$91.60	

need to order. You can then sort these records by vendor and print out a purchase order for each vendor that looks like the purchase order for Cycles Unlimited shown in Figure 6-2.

# **Making the Order Log Form**

You can design the Order Log form yourself, rather than using File's List Helper form. That way, you can vary the sizes of fields and have plenty of room for pictures of the items in your inventory.

# **Entering Field Names and Information Types**

The easiest way to make a form without using the List Helper command is to first enter the field names and information types in the form window with the List Helper command checked in the Form menu, then remove the check mark from List Helper so you can move the fields around and size them (both vertically and horizontally), and create labels for the fields.

- □ Begin by starting File.
- □ Create a new datafile by typing *Order Log* as the name of the datafile and clicking the New button.

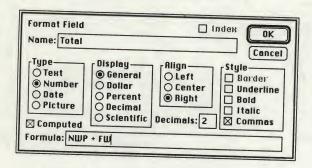
Be sure to save the datafile on its own disk; then put an initialized blank disk in your external drive and click the Drive button if necessary before clicking the New button.

☐ In the form window, type in the following field names and assign these information types:

Field Name	Information Type
Item	Picture
Part #	Text
Description	Text
Cost	Number
NWP	Number
FW	Number
Total	Number
Restock Level	Number
Restock Status	Number
QO_NWP	Number
QO_FW	Number
<b>Total Order</b>	Number
Total Cost	Number
Date	Date
Vendor	Text

The Total, Total Order, and Total Cost fields are computed number fields—that is, they contain formulas. So, you need to format them as Computed and enter a formula in each.

- □ Scroll the form window left until the Total field is visible.
- Double-click in the Total field in the form window. When the dialog box appears, click in the Computed box and click to get an insertion point in the Formula typing field.
- $\square$  Type NWP + FW as the formula.



 $\hfill\Box$  Press the Return key to enter the formula.

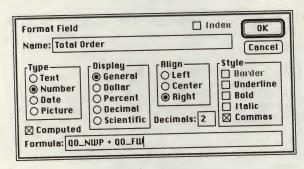
You can click the OK button instead of pressing Return, if you prefer.

- $\hfill\Box$  Double-click in the Restock Status field in the form window.
- In the dialog box, click in the Computed box and click to get an insertion point in the Formula box.

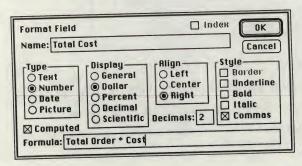
 $\square$  Type Total-Restock Level as the formula.

Format Field		_ (r	ider OK
Name: Restoc	k Status		Cancel
Type O Text Number Date Picture  Computed Formula: Total	© General O Dollar O Percent O Decimal O Scientific		Style    Border   Underline   Bold   Italic

- □ Press Return to enter the formula.
- □ Scroll the form window right until the Total Order field is visible.
- Double-click in Total Order, click in the Computed box and click to get an insertion point in the Formula typing field.
- $\square$  Type  $QO\_NWP + QO\_FW$  as the formula.



- □ Press Return to enter the formula.
- □ Double-click in Total Cost.
- Click the Dollar button in the Display box to change the display to dollar, click the Computed box, and click in the Formula box.
- □ Type Total Order \* Cost as the formula.



The asterisk (\*) stands for multiplication on computers.

☐ Press Return to enter the formula.

Now change the format of the Cost field to Dollar display.

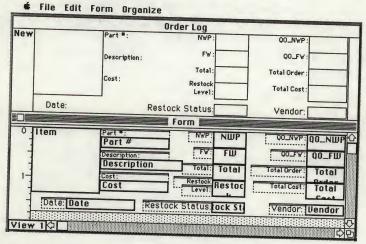
- □ Scroll the form window left so the Cost field is visible.
- Double-click in the Cost field. When the dialog box appears, click the Dollar button in the Display box, then click OK.

# Creating a Form without List Helper

Now that you've entered field names and their information types, and formatted them, it's time to remove the check mark from List Helper, which will allow you to move the fields around, size them exactly the way you want them, and add labels. If this is the first form you've created without List Helper, it may take you a few tries to get exactly what you want—sizing and positioning the fields properly. But don't get discouraged: The more you work at it and experiment using the mouse, the easier it becomes. But if you decide that designing creative forms isn't for you, you can always recheck List Helper.

(Warning: If you design a form without List Helper, you should save it by using the Save As... command. If you don't save it and you accidentally recheck List Helper, your form disappears and you can't get it back. You'll still have a List Helper form with all the information you entered in the datafile, but the form you designed without List Helper will be gone.)

The non-List Helper form you'll create will look like this:

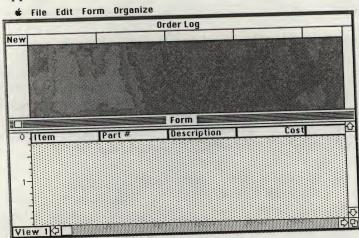


# **Unchecking List Helper**

To remove the check mark from List Helper:

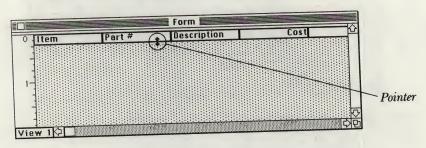
Choose List Helper from the Form menu. When you release the mouse button, the check mark disappears, allowing you to move and size fields as you please. Checking and removing the check mark from List Helper is a toggle action, similar to turning a light switch on and off: If you were to choose List Helper again and then pull down the Form menu a second time, you'd see that the check mark was in front of List Helper once again.

Notice that when you uncheck List Helper, the field headings in the datafile window disappear.

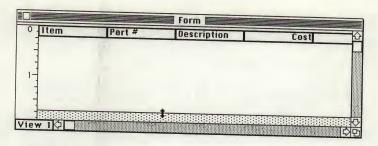


The patterned area below the fields and to the right of the ruler in the form window is called the hide area because it's where you can "hide" fields you don't want displayed in the datafile window. You can change the size of the hide area if you need more space for your form. To give you a longer record, move the top of the hide area down in order to create more room for larger fields. Right now the top of the hide area is at ¼ inch. You need to move it to 1¾ inches. To move the hide area down:

- ☐ Move the mouse pointer to anywhere along the top line of the
- □ When the mouse pointer looks like this:



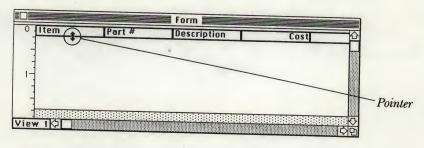
hold down the mouse button, drag the top of the hide area down to the  $1\frac{3}{4}$ -inch mark, and release the mouse button.



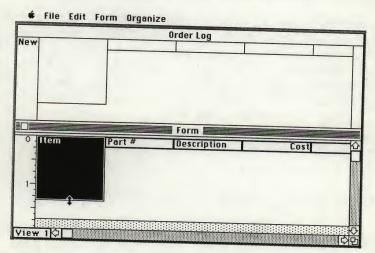
# **Rearranging fields**

Next you need to lengthen the Item field.

□ Move the mouse pointer to the bottom of the Item field. When the pointer looks like this:



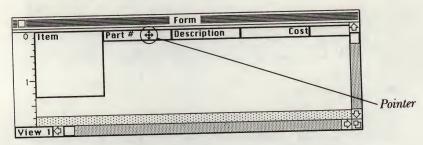
hold down the mouse button and drag the bottom of the Item field until it is 15%6 inches long, then release the mouse button.



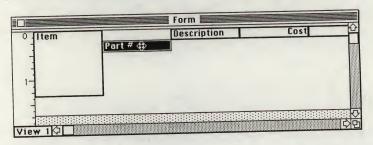
As you can see, the Item field has changed size and is now larger in the datafile window, too.

Now move the Part # field to where you want it to appear.

- ☐ Move the mouse pointer inside the Part # field.
- □ When the pointer looks like this:



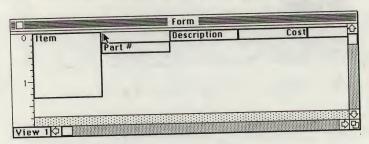
hold down the mouse button, drag the Part # field down about a quarter of an inch, and release the mouse button.



# **Creating labels**

Now you need to create a label for the Part # field. A label is a special type of field you create in the form window that can either contain text or a picture. The label will appear on every record of a non-List Helper form. A label can be used to identify or give information about a particular field. In fact, most of the labels you'll create for your Order Log form will be simply the names of the fields they appear beside. For example, you'll create a label that reads Part #, and position it above the Part # field. But labels are optional (they won't appear on your form unless you create them) and aren't connected to fields (you can position them anywhere on your form).

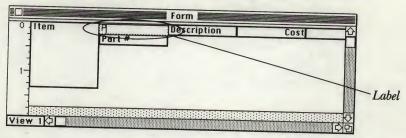
□ Click above the Part # field, just to the right of the Item field.



You'll see an insertion point appear. This is where the letters you type for the label will appear.

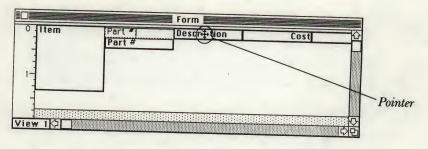
☐ Type Part #: as the text of the label.

As soon as you start typing, you'll see a label field that looks like this:

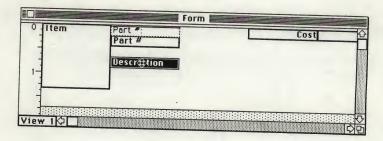


Don't worry if your label box slightly overlays the Part # field; you'll learn how to move labels in just a bit. For the time being, arrange the Description and Cost fields under Part #.

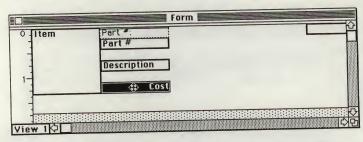
- $\hfill\square$  Move the mouse pointer into the Description field.
- □ When the pointer looks like this:



hold down the mouse button, drag the Description field alongside the Item field, and release the mouse button.

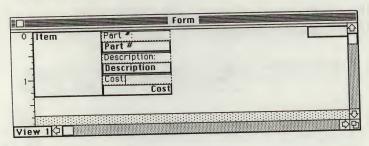


□ Drag the Cost field into position beneath the Description field the same way you moved Part # and Description.



Now you need to add labels to the Description and Cost fields.

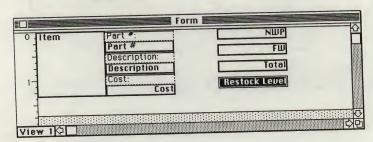
- □ Click to get an insertion point above the Description field just to the right of the Item field and type *Description*: as the text for the label.
- □ Click to get an insertion point above the Cost field and type *Cost:* as the text for the label.



# Polishing the form's appearance

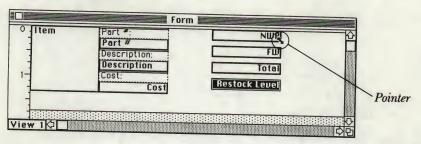
Next move the NWP, FW, Total, and Restock Level fields so they line up underneath each other.

- □ Scroll right until you can see the NWP, FW, Total, and Restock Level fields.
- □ One at a time, drag the NWP, FW, Total, and Restock Level fields over so they look like this:

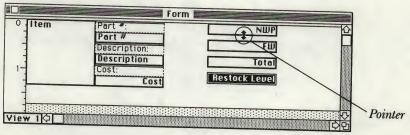


Now you need to size these fields.

□ Move the pointer to the lower right corner of the NWP field, until the pointer looks like this:

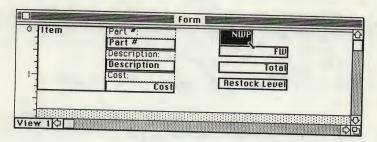


This pointer allows you to size a field both vertically and horizontally at the same time (the field is anchored only at the upper left corner). If you wanted to size the field vertically only (instead of horizontally and vertically), you'd need to move the pointer so that it has this shape:

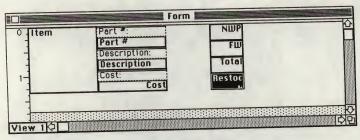


When you drag a field vertically, the field is anchored along the entire top edge.

□ Hold the mouse button down and drag the NWP field down and to the left. Release the mouse button when the field looks like this:



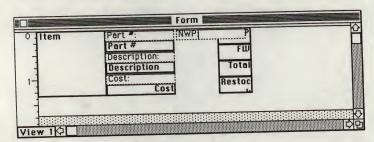
□ Size the FW, Total, and Restock Level fields the same way, so that your form window looks like this:



Notice that the word Restock in the Restock Level field has wrapped around to fit the new size and shape of the field.

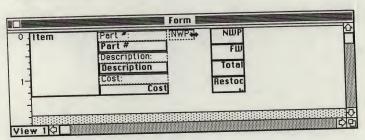
Now add labels to these fields.

- □ Click an insertion point for the NWP label to the left of the NWP field and just to the right of the Part # label box.
- ☐ Type NWP: as the text for the label.



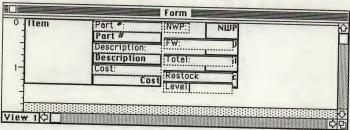
Notice that the label partially covers the NWP field. This is because, without List Helper, File will allow fields to overlap. Overlapping fields may obstruct your view of the data in the field underneath, so you may need to move or size fields so they don't overlap. In the Cycles Unlimited order form example, you do not want the label to overlap the NWP field, so you need to resize the label. You size and move label fields just like any other field.

 Position the mouse pointer on the right side of the NWP label and drag it to the left until it looks like this:



□ Continue entering labels for the FW, Total, and Restock Level fields, one at a time. (Make two labels for Restock Level, one containing the word Restock and the other containing the word Level.) Click an insertion point to the left of each field and type in a label, just as you did for NWP.

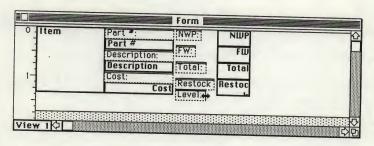
When you finish entering these labels, your form window should look like this:



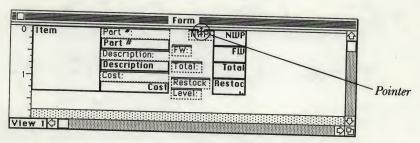
You typed in two separate labels for the Restock Level field because the length of the two words in a single label would have caused the label to partially overlap the Cost field and label.

Now you can resize these labels so they don't overlap any fields.

□ Size the other labels the same way you did the NWP label, until your form window looks like this:



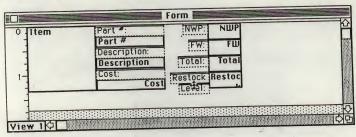
□ Now position these fields so they are as close as possible to the fields they are identifying. Move the pointer to the top of the NWP label box and drag it next to the NWP field.



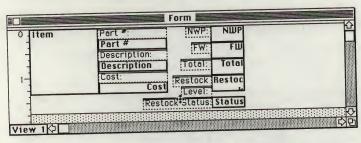
Note the mouse-pointer shape. To move a label field, the pointer must be at the top of the field and have this shape.

□ Position the other labels in the same way.

Your form window should now look like this:

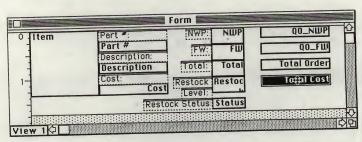


- □ Now move the Restock Status field under the Restock Level field and release the mouse button.
- □ Size the Restock Status field to match the width of the fields above it; then create, size, and position a label for it.



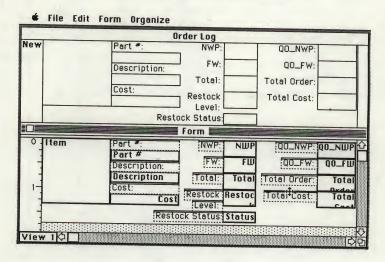
Follow these steps for the next four fields: QO\_NWP, QO\_FW, Total Order, and Total Cost. First move these fields over and position them in column form.

□ One at a time, drag the QO\_NWP, QO\_FW, Total Order, and Total Cost fields into position so they look like this:



- □ Now change the size of the QO\_NWP, QO\_FW, Total Order, and Total Cost fields.
- $\hfill\square$  Move these fields against the right edge of your form window.

□ Now create and size labels for each field and position the labels to the left of the fields so that your screen looks like this:



□ Now move the Date field so that it's centered under the Item and Cost fields, then create, size, and position a label for it.

			Form			
0 Item	Part #		NWP:	NWP	QO_NWP:	QO_NWP
-	Descri	ption:	FW:	FШ	QO_FW:	QO_FW
[.]	Descri Cost:	ption	Total:	Total	Total Order:	Total
	Cost.	Cost	Restock Level:	Restoc	Total Cost:	Total
Date: D	ate	Resto	k Status:	Status		لغموك
View 1						

☐ Finally, position the Vendor field under the Total Cost field, size it to match the width of the fields above it, just as you did with the Status field. Then create and position a label for it so that your form window looks like this:

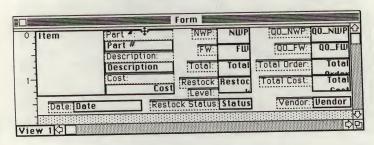
		Form 🔙			
0 Item	Part *:	NWP:	NШР	QO_NWP:	QO_NWP
-	Part # Description:	FW:	FΨ	QO_FW:	QO_FW
, ]	Description Cost:	Total:	Total	Total Order:	Total
` <del> </del>	Cost	Restock Level:	Restoc	Total Cost:	Total
Date: Dat	e Resto	k Status:	Status	Verition:	Vendor
View 1					

You've finished the hard part. All you have left is to make a few cosmetic formatting changes: Change the font size in some of the labels, remove the borders from several fields, and center the numbers in some of the number fields.

# **Changing font sizes**

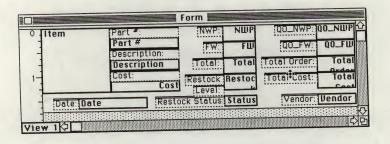
To distinguish the labels from the fields, change the font size of the text for some of the labels to a smaller font. First select all the label fields you want to change and then format them for a smaller font size all at once.

□ Select the Part # label by clicking in the bar at the top of the label.



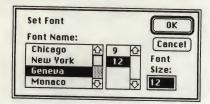
□ Hold down the Shift key and click in the bar at the top of each of the following labels:

Description
Cost
NWP
FW
Total
Restock Level
QO\_NWP
QO\_FW
Total Order
Total Cost



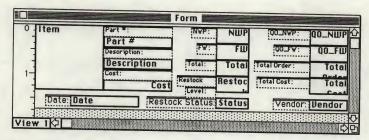
□ Now choose Set Font... from the Form menu.

You'll see a dialog box that looks like this:



File's default label font is Geneva in 12-point size.

□ Click on 9 and OK to change to the smaller 9-point Geneva font.



# **Changing alignment of labels**

While those fields are still selected, you can change the alignment of the text within the selected label fields from left-aligned to right-aligned. Changing the alignment puts the text in the labels closer to the fields they identify.

□ Choose Format Text... from the Form menu and click on the button in front of Right in the Align box, then click OK.

Your screen should now look like this:

0 Item	Part #	NWP: NWP	QO_NWP:	10_NWP
+	Description:	FW FW	Q0_FW:	QO_FW
1-1	Description	Total: Total	Total Order:	Total
	Cost	Restock Restoc	Total Cost:	Total
Date: Dat	Restoci	Status Status	Vendor:	

You don't want the Part #, Description, and Cost labels to be right-aligned, so you need to change those fields back to left alignment. It was easier to keep all the fields selected and change them to right alignment all at once and then change Part #, Description, and Cost back to left alignment, than to select nine of the 12 fields individually.

- □ Click anywhere in the form window to deselect the labels.
- □ Click on the Part # label to select it. Hold down the Shift key and click on the Description and Cost labels.
- □ Choose Format Text Field... from the Form menu.
- □ Click on the button in front of Left in the Align box. Click OK.

Finally, change the alignment of the Cost field so it lines up with the other fields and labels in that column.

□ Double-click on the Cost field, then click on the button in front of Left in the Align box. Click the OK button.

All the fields are now aligned the way we want and the only formatting you have left to do is removing borders and centering numbers.

# **Removing borders**

If you look in the datafile window now, you'll see that all of the fields (but not the labels) have borders—that is, the information in each field is displayed in a box. File automatically puts borders around fields (but not around labels). If you want any of your fields displayed without borders (or any labels displayed with borders), you need to tell File that's what you want. You do this by selecting the field (or label) in the form window and changing the display with the Format Field... command from the Form menu. It's a matter of personal preference whether fields (or labels) have borders; I think the Part #, Description, Cost, and Date fields look better without borders. If you remove the borders from these fields, when you're finished they'll look like this:

		Order Log		
ew	Part #:	NWP:	QO_NWP:	
"		FW:	QO_FW:	
	Description:	Total:	Total Order:	
	Cost:	Restock	Total Cost:	
Date:		Restock Status:	Vendor:	
		Form		too Nuun
0 ltem	Part *:	NWP: NIII	P QO_NWP:	QO_NWP
3	Part #	FV: FL	D 00-1A:	QO_FW
]	Descripti	ion lotal: Total	Total Order	Total
1-	Cost:	Restock Resto	C Total Cost	Total
1	Date	Restock Status Statu	Vendor	Vendor

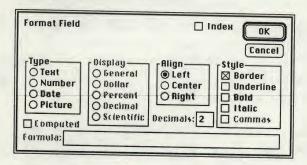
- □ Click in the Part # field to select it.
- □ Hold down the Shift key and click in these fields:

Description Cost

Date

□ Choose Format Field... from the Form menu.

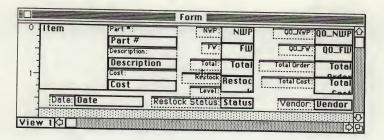
You'll see a dialog box that looks like this:



□ Click the Border box to remove the X in it, then click the OK box.

Borders are now removed from those fields in the datafile window. Note that the two label fields for the Restock Level field don't quite line up with the field itself. You can move these fields up, and partially overlap the Restock label with the Level label.

□ Drag the Restock label up so that it looks like this:

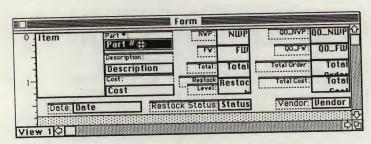


□ Now drag the Level label up so it partially overlaps the Restock field.

Item	Part *:	NWP:	NWP	QO_NWP:	ושא_טון
1	Part #	TV:	FW	QO_FW:	QO_FL
]	Description	Total:	Total	Total Order:	Tota
1-	Cost:	Restock Re	estoc	Total Cost:	Tota
Date: Da		tock Status: \$	tatus	Vendor:	

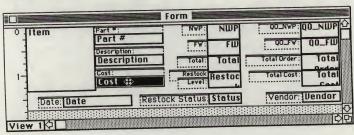
Because of the smaller text size used for the Part #, Description, and Cost labels, the next step is to move up the fields they describe, so that they partially overlap their labels. This will more clearly identify the three fields, and the column will look less cluttered.

□ Drag the Part # field up like this:



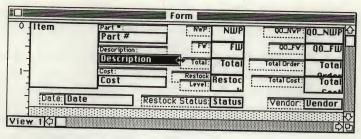
□ Now do the same for the Description and Cost fields.

Your form window should look like this:



Next, widen the Description field so that all of the text displayed in that field will be fully visible in the datafile window.

Place the mouse pointer on the right side of the Description field, drag it to the right until it touches the Total label field, and release the mouse button.



## Changing alignment of numbers

The last step in completing the Order Log form is to center the numbers in the NWP, FW, Total, Restock Level, Restock Status, QO\_NWP, QO\_FW, Total Order, and Total Cost fields. You can do this the same way you removed borders. First select all the fields you want to change. Then you can either choose Format Field... from the Form menu or you can use a shortcut: Double-click on any of the selected fields and the Format Field dialog box will appear just as if you had chosen Format Field... from the Form menu.

- □ Click on NWP to select it.
- □ Hold down the Shift key and click on the following fields:

FW
Total
Restock Level
Restock Status
QO\_NWP
QO\_FW
Total Order
Total Cost

- □ Choose Format Number Field... from the Form menu or doubleclick in any one of the selected fields.
- □ Click on the button in front of Center in the Align box.
- □ Click the OK button.

One last task to make the Restock Status field stand out: Specify that the information displayed in it will be boldface.

- Click anywhere in the form window to deselect the fields that are highlighted.
- Double-click on the Restock Status field and when the Format Number Field dialog box appears, click an X in the box in front of Bold in the Style box.
- □ Click the OK button.

Formatting the Restock Level field for boldface will make it easier to see the information in it and compare it to the current total.

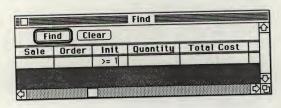
Now you've completed your Order Log form.

# **Copying in Initial Information**

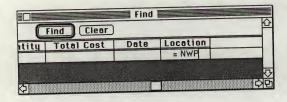
The next step is to copy description and price information from the Inventory Log datafile into the Order Log datafile. That way you won't have to type in the same information twice.

In your Order Log, you have only one copy of each inventory item, so you need to find items in your Inventory Log with values in the Init field greater than 1 at one location. Then sort these records by part number in ascending order, and copy these records into the Clipboard. Next, load your Order Log and paste these records in. Here are the steps to do this:

- □ Click in the datafile window to make it active.
- □ Choose Open Datafile... from the Form menu.
- □ Click the Eject button and insert your inventory data disk.
- □ Double-click on the Inventory Log datafile.
- □ Follow the disk-swapping prompts.
- □ Choose Find... from the Organize menu.
- □ Click the Clear button to remove previous search criteria.
- $\Box$  Click in the Init field and type  $\geq = 1$  as the search criterion.



 $\square$  Scroll the find window to the right and click in the Location field and type = NWP as the search criterion.



□ Click the Find button.

This tells File to find all initial inventory items at one location. It doesn't matter which location code (NWP or FW) you type. Because the two stores carry the same items in their inventories, this list will be a complete list of inventory items.

- □ Choose Sort.... from the Organize menu. Click the Clear button in the Sort window to remove any previous sort criteria.
- □ Click in the Description field.

You should see A->Z in the right and larger of the two boxes dividing the field, indicating that File will sort the records in alphabetical order by the information in the Description field.

□ Click the Sort button.

Sort Clear Description				
A->7	Cost	Sale	Order	Init
. / 2				

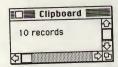
You are telling File to sort the Inventory Log records so that when you copy these records and paste them into the Order Log datafile, the information in the Order Log datafile will be in the same order as the Inventory Activity report you will generate. Then, when you later copy these totals manually from the report into the Order Log datafile, both totals will be in the same order—alphabetical by Description.

□ Select all the records by clicking any one of the record numbers, then choosing Select All from the Edit menu.

	Description	Cost	ntory L	Order	Init	Quantity	-
1	axle – front	\$22.90		Order	6	6	
2	axle - rear	\$31.75			9	9	_
3	fenders - rear	\$11.60			9		
4	gloves - cycling	\$6.88			17	9	_
5	helmet - pro	\$32.50			3	17	_
6	pedals - black	\$6.75				3	_
7	pedals - silver	\$6.45			20	20	_
8	pump - floor	\$17.20			15	15	_
9	pump - frame	\$14.24			15	15	
10	skinshorts	\$24.90			12	12	
ew		¥24.50			16	16	
7		1.77	77				

□ Choose Copy from the Edit menu.

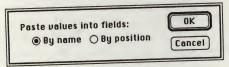
The selected records are copied to the Clipboard. If you want to check to see that this actually happened, choose Show Clipboard from the Edit menu. You should see a window like this:



Click the close box in the upper left corner of the Clipboard when you're done viewing the contents. Now to transfer this information to the Order Log datafile:

- □ Choose Open Datafile... from the File menu.
- □ Click the Eject button and insert your Order Log data disk.
- □ Double-click on Order Log.
- □ Follow the disk-swapping prompts.
- □ Select the new record by clicking on the word New.
- □ Choose Paste from the Edit menu.

You'll see a dialog box that looks like this:



You can paste records in from the Clipboard by name or by position. You don't want the By position option for your Order Log because the positions of the fields in the Inventory Log datafile don't match the positions of the fields in the Order Log datafile. You want the records pasted in By name. When you choose the By name option, File matches up the field names of the records in the Clipboard with the field names in the datafile, and pastes the information into the corresponding fields. In our example, File will paste all of the Description, Cost, and Date fields from the Clipboard into the Description, Cost, and Date fields in the Order Log datafile. It's important that the field names in the Clipboard and those in the datafile are exactly the same because File discards fields in the Clipboard with names that do not match field names in the datafile.

□ Click the OK button.

The Description, Cost, and Date fields should now be pasted in and, if you scroll the window up, your screen should look something like this:

			Order Log			
'		Part #;	NWP:		QO_NWP:	
		Description:	FV:		Q0_FW:	
		axle - from	nt Total:	0	Total Order:	0
		Cost: \$22.90	Restock Level:		Total Cost:	\$0.00
	Date: Jan 1,	1986	Restock Status:	0	Vendor: [	
2		Part #:	NWP:		QO_NWP:	
		Description:	FV:		QO_FW:	
		axle - rear	Total:	0	Total Order:	0
		\$31.75	Restock Level:		Total Cost:	\$0.00
	Date: Jan 1,	1986 F	Restock Status:	0	Vendor:	
3		Part *:	NWP:		QO_NWP:	
1/1	0段口	888888888888888	FY:		00_FW:	

# Adding Restock Level, Vendor, and Part # Data

The next step is to add a restock-level number, identify the vendor for each item, and add the vendor's part number for each item in the Order Log. The restock level is a number that indicates the number below which you do not want your inventory level for that item to fall. The Restock Status formula subtracts this number from the number in the Total field to determine if an item should be reordered (depending on the value of the number displayed). Enter a three-letter code in the Vendor field to identify the vendor for each item. The part number is the vendor's part number for items you order. You can use this vendor information and the restock-status information to find all items from a particular vendor that you need to reorder and you have all the information you need to generate a purchase order for that vendor.

To enter this information:

- Click an insertion point in the Restock Level field for the first record in your Order Log.
- □ Type a number representing the minimum inventory level.

			Order Log			
1		Part #:	NWP:		QO_NWP:	
		Description:	FW:		Q0_FW:	
		axle - front Cost:	Total:	0	Total Order:	0
		\$22.90	Restock Level:	14	Total Cost:	\$0.00
	Date: Jan 1,	1986 Rest	ock Status:	0	Vendor:	
2		Part #:	NWP:		QO_NWP:	

□ Click in the Part # field in the same record and type the manufacturer's part number for that item.

,		Order Log		
	Part *:	NWP:	QO_NWP:	
	SA42281	FV:	Q0_FV:	
	Description: axle - front	Total: 0	Total Order:	0
	Cost: \$22.90	Restock Level:	Total Cost:	\$0.00
Date:	Jan 1, 1986 Re	stock Status: -14	Vendor:	
2	Part #:	NWP:	QO_NWP:	

The Part # is the number you'll need to use when you reorder. Entering it in the Order Log ensures that it will automatically be copied onto the order form for each item you order.

Part # is a text field to allow for part "numbers" that include letters as well as numbers.

□ Click in the Vendor field and enter a three-letter code to represent the vendor you order that item from.

	t Form Organize	Order Log			
	Part #:	NWP:		QO_NWP:	
	SA42281	FW:		QO_FV:	
1	Description: axle - front	Total:	0	Total Order: (	0
	Cost: \$22.90	Restock Level:	14	Total Cost: \$0	.00
Date:	 Jan 1, 1986 Re	stock Status:	-14	Vendor: PBI	
2	Part #:	NWP:		QO_NWP:	

☐ Continue adding the Restock Level, Part #, and Vendor information for each of the items in your inventory.

It's difficult to use the Return key to move from one field to another field in a non-List Helper form, since the insertion point won't follow a linear pattern as it does in a List Helper form. Instead, just click to put the insertion point in the field you want to enter information into, enter the information, then click in the next field you want to add information to.

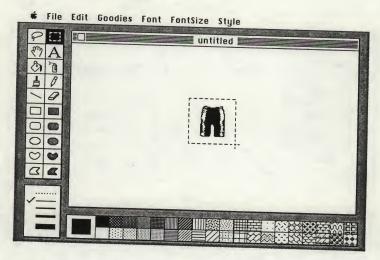
#### **Adding Pictures**

The next step—adding pictures to your datafile—is fun. There are several ways to do this. If you've got some artistic ability, you can use MacPaint to create pictures of your inventory items. Don't worry about the size of the image you create—both MacPaint and File allow you to resize your drawings.

Quit File, eject both disks (File and your data disk), and restart your Macintosh with your MacPaint disk in the internal drive and a data disk in the external drive.

If the data disk hasn't been initialized, initialize it and name it something descriptive like File Art.

- □ Start MacPaint and create an image you want to use in your datafile.
- ☐ Use the selection rectangle to select it.



 $\hfill\Box$  Choose the Copy command from the Edit menu.

This places the selected image in the Clipboard.

- □ Choose the Save command from the File menu to name and save the file on your File Art disk in case you want to use it again.
- □ Choose Quit from the File menu.
- ☐ Eject both disks, then insert your File Master disk in the internal drive and your Order Log data disk in the external drive.
- □ Double-click on the Order Log icon to open it and start File.
- □ Follow the disk-swapping prompts.

By asking you to swap disks, the Macintosh is transferring the Clipboard information from your MacPaint disk to your File Master disk.

- ☐ After the Order Log datafile is loaded, scroll to the record you want to paste the picture into.
- □ Click in the Item field to select it.

,			Order Log		
		Part *:	NWP:	QO_NWP:	
0		7088-2	FW:	Q0_FW:	
	4	Description: skinshorts	Total: O	Total Order:	0
		Cost: \$24.90	Restock Level: 20	Total Cost: \$	0.00
	Date: Jan	1, 1986 Res	stock Status: -20		W
ew	-	Part *:	NWP:	QO_NYP:	

Note the pointer shape. Since this field was formatted as a Picture field, the pointer will take on this shape when it is over this field.

□ Choose Paste from the Edit menu.

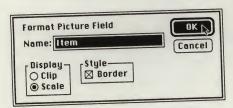
<b>é</b> F	ile Edit For	m Organi	ze			
10		Part *: 7088-2 Description:	Order Log NWP:		QO_NWP: QO_FW:	Č
		skinshorts Cost: \$24.90	Total: Restock Level:	20	Total Order: Total Cost:	
New	Date: Jan 1,	1986  Part #:	Restock Status:	-20	Vendor:	CAW
MeM	~~					

Your picture appears in the Item field for that record in your Order Log datafile.

File has two options for formatting picture fields, Clip or Scale. File's default display format for picture fields is Clip. In Clip format, if the picture is larger than the picture field, File displays only as much of the picture as will fit in the field, starting at the upper left corner. If the picture is smaller than the field, the picture is displayed in the upper left corner of the field.

In Scale format, File adjusts the dimensions of the picture so that it fits in the field. If the picture doesn't fit the box:

- □ Choose Format Picture Field... from the Form menu.
- □ When the dialog box appears, click on the button in front of Scale in the Display box and click the OK button.



The picture is sized to fit the field. Click in another field to deselect the Item field, and your picture looks like this:

?:
:
0
\$0.00
CAW

Changing the formatting from Clip to Scale for a picture field changes the formatting for that field in all the records in your datafile, not just one record.

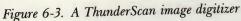
□ Continue this procedure for all the items in your datafile that need pictures: Create a picture, copy it into the Clipboard, find the corresponding record in your Order Log, and paste it in.

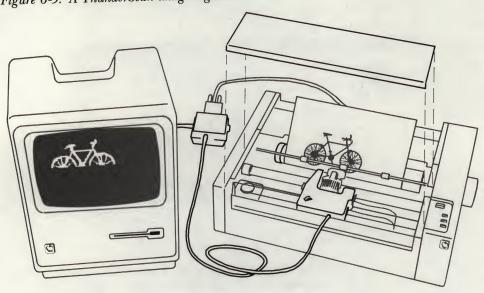
This will take some time to do, but you only need to do it once (unless, for example, you add or discontinue some items) and you can use this order log for as long as you own your business.

### **Using a Digitizer to Create Pictures**

If you, like me, are only a marginal artist, with the purchase of one additional piece of equipment you, too, can have pictures in your datafiles without having to draw them yourself. I used a ThunderScan, shown in Figure 6-3, a device called an image digitizer that replaces the ribbon cartridge on the ImageWriter printer and digitizes pictures.

ThunderScan allows you to digitize virtually any picture, drawing, or any other image that will fit into the platens of the ImageWriter. You simply insert the picture into the ImageWriter just as you would insert a single sheet of paper and tell the ThunderScan program to start scanning. A device that replaces the ribbon cartridge scans back and forth across the picture while the ImageWriter advances the page. As it scans, a digitized image is built on the Macintosh screen. Having a screen image allows you to check and optionally adjust things such as image brightness and contrast. When the scan is completed, you can save the digitized screen as a MacPaint file. If you do this, you can bring the image into MacPaint and use MacPaint's tools to size it and clean it up a bit. Then you select the part you want in your Order Log, copy it to the Clipboard, and then paste it into your Order Log datafile. It's really quite remarkable. Just as word processors made those of us who are marginal typists able to produce documents that look good, so products like ThunderScan enable marginal artists to produce reasonable graphics. And it's fun to use, too.





ThunderScan is small, reasonably priced, and easy to use. There are other image digitizers available for the Mac that also work well. But most others currently available require a video camera and are more expensive.

Once you've added pictures to your picture fields, you're done with the first step in setting up your order log. You've created a record for each item you stock at two locations, with information regarding the vendor, cost, and part number for each item. The next step is to create a purchase-order form you can use to order items from vendors once you determine what items you need to order and from whom.

# **Making the Purchase-Order Form**

The purchase-order form is a printed form that you send to the vendor when you actually order. You find items in your order log that you need to order from each vendor, load that vendor's order form, print it, and your purchase order is completed.

A typical purchase-order form looks like the one for Cycles Unlimited shown in Figure 6-4.

It's easy to put a picture at the top of the form in an area called the header area using an image created in MacPaint (or ThunderScan and MacPaint) and transferred in via the Clipboard. But you can make a purchase-order form with or without a picture.

Figure 6-4. A sample purchase-order form for Cycles Unlimited

	The second	P.O. BC	X 16288	PURCHASE ORD PACIFIC BIKES DATE: JANUARY	INC.
QUANTITY:	NYP FV		LE, WA 98144	PO #: 20014	
3		PART *:	DESCRIPTION:	UNIT COST: 1	TOTAL COST:
10		2 SA42381 4 BP94078	axle - rear	\$31.75	\$95.25
4	4	SP94178	pedals - black pedals - silver	\$6.75	\$67.50
		1	Ibenois - Sliver	\$6.45	\$25.80

To make a purchase order:

- □ With your Order Log datafile loaded, choose Show Form from the Form menu.
- $\hfill\Box$  Click in the View 1 box in the lower left corner of the form window.

View 1 changes to view 2, which is a List Helper form, in the form window. You can verify this change by pulling down the Form menu and seeing that List Helper is checked.

Form Organiza	е
Show Form	₩G
✓List Helper Vertical Form	••••••••••
Format Field Set Font	<b>₩</b> D

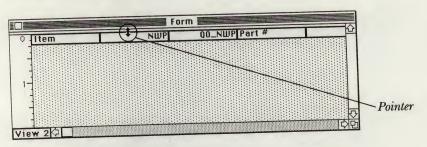
Remember, File stores two forms with each datafile. Clicking on the view box in the form window is an easy way to alternate between the two views.

We are going to make view 2 the purchase-order form, and leave view 1 as the order log form.

For the purchase-order form, we are going to create a header area for the entire file. This header area is different from the individual record headers that are automatically created for each field when List Helper is checked. A header is a blank space you create at the top of the datafile. Although File initially makes a field heading with the same name as the field it is identifying (even the ones in the hide area) and places them in the heading area, you can move these down into the hide area or delete them and create a new, customized heading that is independent from the records in the file. You can then paste in pictures from the Clipboard or create labels anywhere in the heading. We've used the heading area to create customized purchase-order forms for Cycles Unlimited.

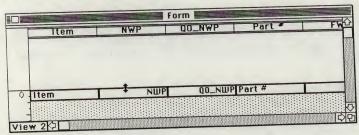
The first step is to make room at the top of the form for the heading.

- □ Remove the check from List Helper by pulling down the Form menu and then choosing the List Helper command.
- □ Position the mouse pointer anywhere along the top of the form. When the pointer looks like this:



drag down until the horizontal line that appears as you start to drag is at the  $1\frac{1}{4}$ -inch mark on the ruler on the left edge of the form window and release the mouse button.

Your form window now looks like this:

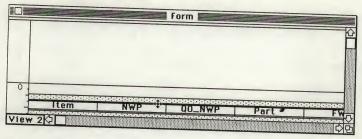


What you have just done is move down the position where the first record appears on the form, creating a blank area at the top for the heading. Notice that the field headings File created for each field are now visible. To remove them from the heading area:

□ Choose Select All from the Edit menu.

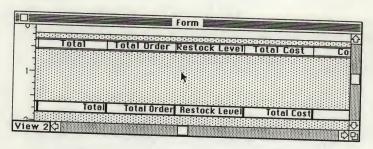
This selects everything in the form window, both the fields and the headings created in the header area.

Position the mouse pointer over any one of the selected headings and drag all of the copies down into the hide area; then release the mouse button.

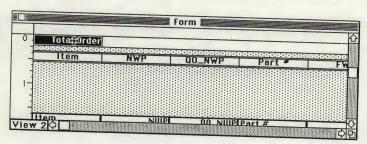


Notice the thin area just above the hide area and just below the header area. This is the place where you need to move the records you want to use in your purchase-order form.

- □ Scroll the form window down and then right until you locate the Total Order field.
- □ Click anywhere in the hide area to deselect all the fields currently selected.



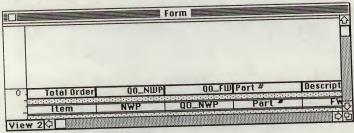
Drag the Total Order field up and to the left so that it's the first field in the purchase-order form, then release the mouse button.



☐ In the following order, select the following fields and drag them from the hide area into the visible area of the form:

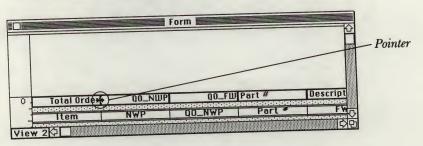
QO\_NWP QO\_FW Part# Description Cost Total Cost

Your form window should look something like this:



Next, you need to size these fields so that they will fit across one page when you print your purchase order.

- □ Scroll the form window all the way to the left and all the way up.
- □ Put the mouse pointer on the right side of the Total Order field. When the pointer looks like this:

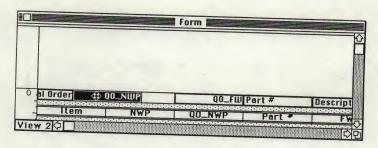


hold the mouse button and drag the right edge of the field to the left to shorten the field. Release the mouse button.

	ron	m		
a Orde <del>d)</del>	QO_NWP	QO_FW	Part #	Descrip

Notice that the QO\_NWP field didn't move to the left to fill the gap left by shortening the Total Order field as it would have done in a List Helper form. So before you shorten the QO\_NWP field, you need to move it over.

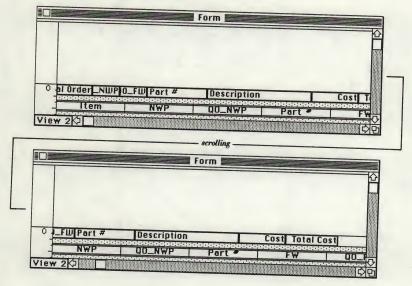
□ Drag the QO\_NWP field to the left until it's next to the Total Order field.



□ Now shorten it, then continue moving and adjusting the sizes of the rest of the fields in the visible area of the form window. Your form should look like Figure 6-5.

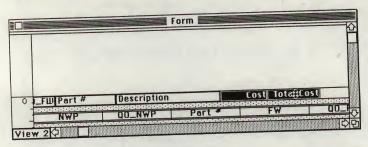
At this point, you may want to click in the datafile window to make it active, choose the Print Records... command from the File menu, and print a few records to make sure your form fits on one page. Make any width adjustments in the form window as necessary. When you're through, return to the form window again to continue creating the purchase-order form.

Figure 6-5. The form window, displaying the Purchase Order form



Next, reformat the Cost and Total Cost fields for dollar display, since changing to the view 2 form stripped these fields of that format.

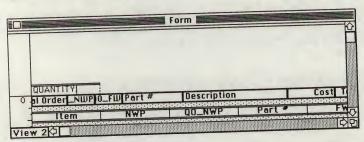
 $\hfill\square$  Hold down the Shift key and click on the Cost and Total Cost fields.



□ Choose Format Number Field... from the Form menu, click on the Dollar button in the Display box, then click the OK button.

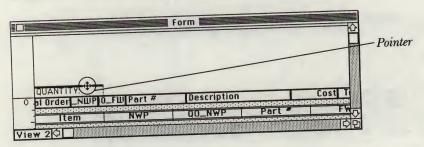
Now all you need to do is add labels for your fields, add the name and address of your company and a picture to the heading, and you're through with your basic purchase-order form.

- □ Scroll the form window all the way to the left.
- □ Click an insertion point above the leftmost field and type *QUANTITY*: as the text for the label.

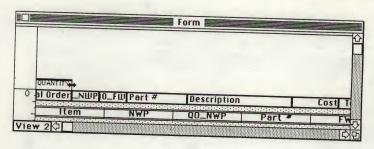


Choose a smaller font so the longer labels will match the sizes of the fields.

□ Click in the small bar at the top of the Quantity label box in order to select it.



- □ Choose Set Font... from the Form menu. When the dialog box appears, click on the 9 to select 9-point Geneva text, then click on the OK button.
- □ Now move the mouse pointer to the right side of the Quantity label and size it so the box is about the same width as the contents of the field below it.

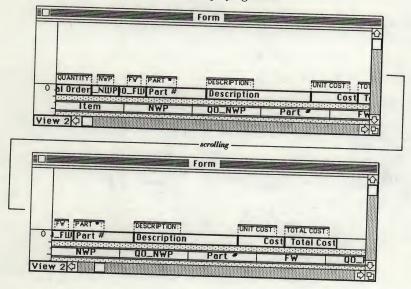


 Now add labels the same way for the NWP, FW, Part #, Description, Cost, and Total Cost fields so they look like the fields in Figure 6-6.

You'll see that as you type each label, the font size is in 9-point. It will remain in that size for each field until you choose the Set Font... command again and choose a different font size.

Remember, the label names don't have to be the same as the fields they appear above. Also, it's a good idea to enter the text in all capital letters to make them stand out from the actual order information.

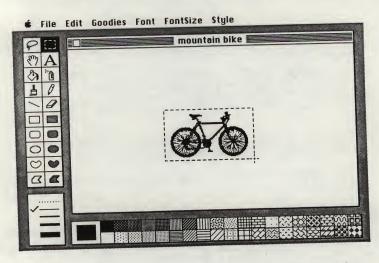
Figure 6-6. The form window, displaying labels



# Adding a Picture to the Header

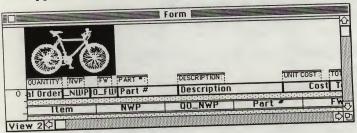
Adding a picture to a header is much like copying a picture into a datafile field formatted as a picture field. What you do is this:

- ☐ Create a picture in MacPaint, or digitize one and save it as a MacPaint file.
- □ Select it with the selection rectangle and copy it to the Clipboard.



- Quit the MacPaint program, eject the MacPaint and MacPaint data disks, insert your File Master and File data disks, and load your Order Log datafile and the File program.
- Choose Show Form from the Form menu and, if necessary, click in the View box to change to the correct form.
- □ Click an insertion point in the header area.
- □ Choose Paste from the Edit menu.

File places the upper left corner of the picture at the insertion point.

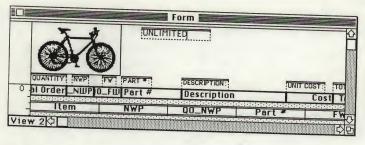


It is important to select the MacPaint picture carefully because File will use whatever size selection rectangle you used in MacPaint as the size of the picture field in the header. If your selection is too large for the header, File will hide the lower portion of the picture under the data records. Even if you choose the Clip or Scale option, the picture will remain as it was pasted in: As far as File is concerned, the picture fits the field that was created for it. If your picture is too large, you can shrink the field by lengthening the header area until you can see the bottom of the picture. Then you can use File's field-sizing tools to make the field, and subsequently the picture in it, smaller.

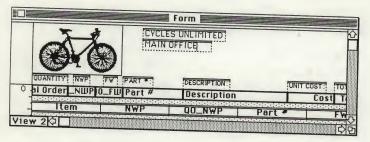
You must do all your pasting and creating in the form window. File will not allow you to enter any information into the header area as long as the data-file window is active.

Now add the name and address of your company to the order form as a series of labels.

- $\hfill\Box$  Click an insertion point next to the picture, near the top of the form.
- □ Choose the Set Font... command from the Form menu, click on 12, then click OK.
- $\square$  Type CYCLES UNLIMITED as the first line of the address.



- □ Place the pointer on the right edge of the label field, and drag it to the right until the entire label is visible. Release the mouse button.
- □ Now click another insertion point below where you clicked the last one, and type *MAIN OFFICE* as the second line of the address.



□ Continue clicking insertion points and typing in the company address, city, and zip code information. Then size these labels.

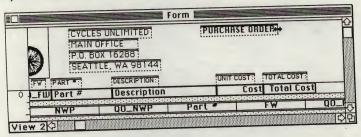
When completed, your form window will look like this:



- $\hfill\square$  Now scroll the form window to the right until the right edge of the form is visible and click an insertion point near the top of the form, about one inch to the right of the CYCLES UNLIMITED label.
- □ Type PURCHASE ORDER as the first line of text.
- □ Now, if you wish, click on the small bar at the top of this label and choose Set Font... from the Form menu. Click on Chicago to change the font to Chicago, and click the OK button.
- ☐ Then size the label so it will display all the text in it.

You can experiment with different fonts and sizes until your form looks exactly the way you want it.

The Cycles Unlimited form now looks like this:



This completes your basic purchase-order form. It contains information you will include on all order forms, regardless of vendor. Save this form to use when you add purchase-order forms for new vendors or when you create a purchaseorder form for special-order items from a vendor you don't usually use.

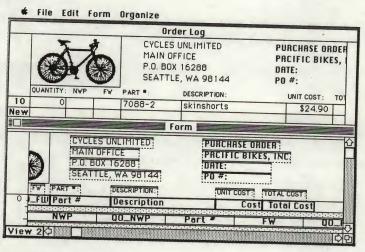
□ Choose Save Form from the File menu.

The view 2 form is now saved with the Order Log datafile.

You can now add specific vendor information to the basic purchase-order form and create a form for each vendor you do business with.

- □ Click an insertion point under the PURCHASE ORDER label in the heading and create a label with the name of the vendor. Size the label, if necessary.
- □ Click an insertion point under the vendor name and create two labels, typing Date: and PO# as the text.

Every time you print a purchase order to this vendor, you will click an insertion point in each of these fields and type the current date and purchase-order number you are using. Your completed purchase-order form for the first vendor should look like this:



Now save this form under its own name so you can open it when you're ready to order from this vendor. That way, you won't have to retype the vendor information each time you want to make an order.

- □ Choose Save Form As... from the File menu.
- □ When the dialog box appears, type in the name of the vendor, then press Return.

When you need to load this form again, it will be easy to distinguish the separate order forms.

- □ After saving the form, drag across the name of the vendor in the form window and type in the name of the next vendor.
- □ When you have completed this task, choose Save Form As... again from the File menu and save this form under the name of the second vendor.

When you finish this process, you will have order forms ready for all the vendors you do business with, as well as a blank generic form to create forms for new vendors or special-order items.

When you're through with the current session and you choose Quit from the File menu, click the No button when File asks you if you want to save the current form with the Order Log datafile. Since you've already saved this form with the Save Form command, and have saved all the vendor forms individually, you're covered.

#### **Ordering Tasks**

Cycles Unlimited places an order every two weeks. Every two weeks, Gus prints an inventory report from his Inventory Log datafile to get current totals at each location and then he copies these totals manually into the Order Log datafile. Next he finds the items he needs to order from each vendor, loads the order form for that vendor, and prints a purchase order for each vendor with the items he needs to order.

You can follow these same steps whether you order weekly, every two weeks, or once a month.

#### **Getting an Inventory Report**

First, you need to return to the Inventory Log datafile and print a report to give you current inventory totals at each location.

To do this:

- □ Click in the datafile window to make it active.
- ☐ Choose Open Datafile... from the Form menu.

If you stored your inventory log on another disk, eject the disk with your order datafile on it and insert the disk with the inventory log on it.

- □ Double-click on Inventory Log.
- □ Choose Report... from the Organize menu.

Check to be sure your report window looks like this:

Sort	A->Z	Z->A 4	Not Sort		7-4-1
Heading	Description	Location	Cost	Quantity	Total
Field	Description	Location	Cost	Quantity	Tot
				Total	Total
by Locati				Total	Total
by Descri	P				Total
Grand					

This is the report you set up in Chapter 5. You may need to sort the Inventory Log datafile by Location in descending order (Z->A) so that the order of the datafile matches the order in your form. If you need help rearranging your report window to look like this, refer to Chapter 5.

□ Click an X in the Summary Report box and choose Print Report... from the File menu.

You should get a summary report that looks something like the printed report shown in Figure 6-7.

Figure 6-7. A sample summary report for Cycles Unlimited

Description	Location	Quantity	Total Cost
axle - front	NWP	6	\$137.40
axle - front	FW	8	\$183.20
Total for a	xle - front:	14	\$320.60
axle - rear	NWP	9	\$285.75
axle - rear	FW	8	\$254.00
Total for	axle - rear:	17	\$539.75
fenders - rear	NWP	7	\$81.20
fenders - rear	FW	13	\$150.80
Total for fend	ders - rear:	20	\$232.00
gloves - cycling	NWP	17	\$116.96
gloves - cycling	FW	25	\$172.00
Total for gloves	s - cycling:	42	\$288.96
helmet - pro	NWP	6	\$195.00
helmet - pro	FW	6	\$195.00
Total for he	lmet - pro: ¯	12	\$390.00
pedals - black	NWP	14	\$94.50
pedals - black	FW	16	\$108.00
Total for peda	ls - black:	30	\$202.50
pedals - silver	NWP	15	\$96.75
pedals - silver	FW	21	\$135.45
Total for pedal	s - silver:	36	\$232.20
pump - floor	NWP	15	\$258.00
pump - floor	FW	6	\$103.20
Total for pun	np - floor:	21	\$361.20
pump - frame	NWP	9	\$128.16
pump - frame	FW	7	\$99.68
Total for pum	o - frame:	16	\$227.84
skinshorts	NWP	11	\$273.90
skinshorts	FW	17	\$423.30

continued

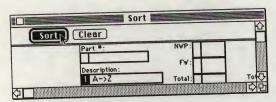
Description	Location	Quantity	Total Cost
Total for	skinshorts:	28	\$697.20
		Total:	\$3,492.25

# Copying Report Totals into the Order Log

The next step is to copy the totals from the summary report into the Order Log datafile. This is a task that must be done by hand, and it will take a few minutes to do. But the benefits of using this system outweigh the disadvantage of copying in the totals manually.

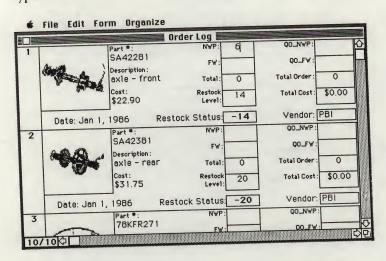
To copy in the report totals:

- □ Open the Order Log datafile.
- □ Hold down the Command key; press T to toggle to the view 1 form.
- □ Choose Sort... from the Organize menu.
- Click the Clear button to clear previous sort criteria.
- □ Click in the Description field, then click Sort.



This will put your records in the same order as in the summary report.

□ For each record in Order Log, click an insertion point in the NWP box, locate the current NWP total from the summary report, and type in that total.



- □ Next click in the FW box. Locate the FW total on the summary report and type its total into the FW box.
- □ Complete these two steps for each of the items in your inventory.

It should not take more than a few minutes because the items in your summary report are arranged in ascending alphabetical order by description just like the items in your inventory log. And File will total the inventory at both locations so you needn't copy in the total from the summary report. You can compare the totals on your summary report to the totals in your order log to verify that the information has been entered correctly.

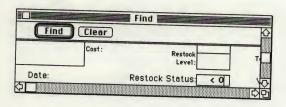
#### **Completing Ordering Information**

The next step is to find all records with a negative value in the Restock Status field. This will tell you which items need to be reordered, and the negative number will tell you how many items you need to reorder to get back up to the restock level. Over time, by comparing orders you'll be able to spot fast-moving items, so you can raise your restock level to meet the demand.

After finding out which items you need to order, you then need to sort these items by vendor. Then decide how many of each item to order for each location, and enter that information in the QO\_NWP and QO\_FW fields. Ordering by location allows you to distribute items easily to the right locations. Next, load the purchase-order form for that vendor, assign a purchase-order number, and print out a purchase order. You can then go back to your Order Log form and repeat the process for each vendor.

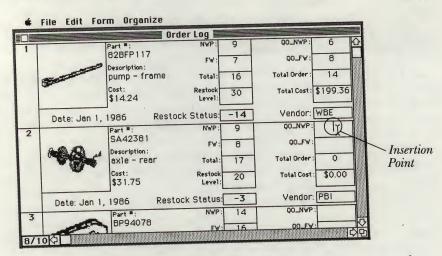
The first step is to locate all items you need to reorder.

- □ Choose Find... from the Organize menu.
- □ Click the Clear button to clear previous search criteria.
- □ Scroll the find window down until the Restock Status field is visible.
- $\Box$  Click in it and type < 0 in the Restock Status field to locate all records with negative restock status.



- Click on the Find button, and File will locate all items that you need to reorder.
- □ Now scroll through the records, look at the Restock Status and Total fields, and determine the number of items you need to order for each location.

- □ Click an insertion point in the QO\_NWP and enter the amount for that location, then click an insertion point in QO\_FW and enter that amount.
- □ Click an insertion point in the QO\_NWP field for the next record.

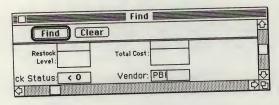


Notice that File computes the total order and total cost of the previous record and displays this for you.

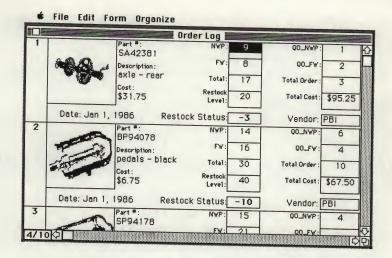
□ Continue through the rest of the records, entering quantities to order for each item at each location.

The final step is to create the purchase orders for each vendor.

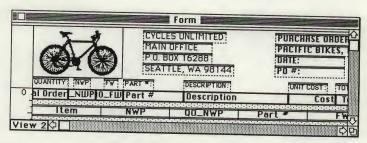
- □ Choose Find... from the Organize menu.
- □ When the find window appears, scroll it to the right until the Vendor field is visible, and then type in the three-letter code for the first vendor.



Now click the Find button, and File will locate all items you need to order from that vendor.

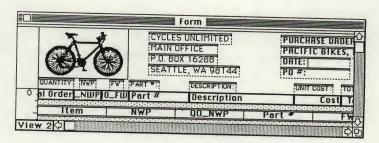


- □ Choose Show Form from the Form menu. In the form window, click on view 1 in the lower left corner to change to view 2.
- □ Now choose Open Form... from the File menu. When the dialog box appears, double-click on the name of the vendor you want to order from to see the form for the vendor you specified.



All that's left for this purchase order is to enter today's date in the Date label and the purchase-order number in the PO # label in the heading area.

□ Click an insertion point after the word Date: in the Date label to select it.



□ Type in today's date, then lengthen the Date label, if necessary.

You can't use the Command and hyphen keys at this point because File doesn't automatically insert anything into label fields.

□ Now click an insertion point in the PO # label, and type in the purchase-order number for your order.

All you need to do now is print this purchase order.

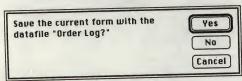
- □ Click anywhere in the datafile window to make it active.
- □ Choose Print Records... from the File menu.

It's a good idea to keep a paper copy of each purchase order for yourself as a back-up, so tell File to print two copies.

□ When the dialog box appears, double-click in the Copies typing field and type 2 for the number of copies. Click the OK button to tell File to begin printing. When printing stops, your purchase order should look something like the purchase order from Cycles Unlimited shown in Figure 6-4.

To print purchase orders for the rest of the vendors, repeat the search criteria for the different vendors, load their purchase-order forms, and print the purchase orders.

When you've finished printing your purchase orders, you're ready to close the Order Log datafile and open a new datafile for mailing labels. Before you close the Order Log datafile, File will ask you if you want to save this form.



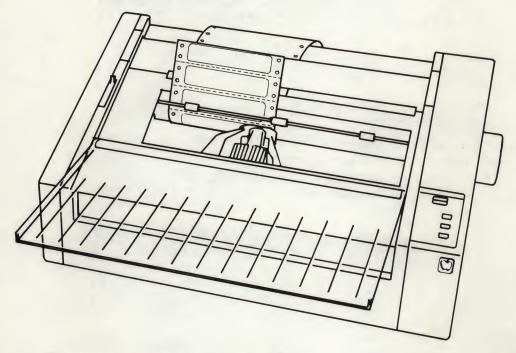
□ Click No, because the View 2 form already attached to your Order Log datafile is the one you'll want to keep with your datafile.

#### **Creating Labels**

One of File's useful features is the ability to take a datafile containing name and address fields and print mailing labels from them. You can buy continuous-form adhesive labels that will work with most tractor-feed printers, as shown in Figure 6-8.

You can use File to print labels for your vendors. Then all you'll need to do is print the labels, stick them on the envelopes, and your orders will be addressed and ready to drop in the mail.

Figure 6-8. Continuous-form mailing labels in an ImageWriter printer



To set up a vendor name and address file:

- □ Pull down the File menu and choose New Datafile....
- $\hfill\Box$  Type Vendors as the name of the datafile and click the New button.

The Vendor file opens with the form window active. The next step is to make the mailing label form. First, enter the field names and their information types.

□ Type *Vendor* (the field for the vendor's name) and then press Return twice.

Pressing Return twice is File's shortcut for choosing the Text information type.

□ Enter the following fields and, after typing each name, press Return twice to choose the Text information type:

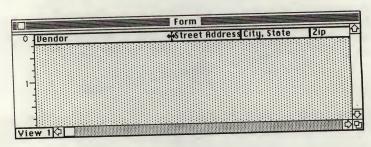
Street Address City, State Zip Scroll the form window all the way left, and your form will look like this:

Wendor	Street Address City, State	Zip	
000000000000000000000000000000000000000			
4			
1			
1			
7			
1			
-			
1			
† ew 1(⊅[			

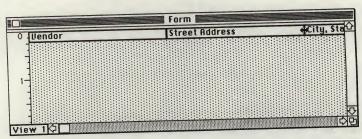
Next, make the Vendor and Street Address fields longer so they'll display more characters in the datafile window.

□ Position the mouse pointer on the right edge of the Vendor field.

Hold down the mouse button and drag the edge to the right until it is about twice its original length, then release the mouse button.



☐ Lengthen the Street Address field the same way.

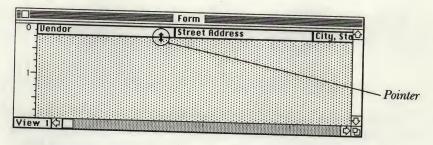


Next you need to remove the check from List Helper and rearrange the fields vertically to make the form look (and print) like a mailing label.

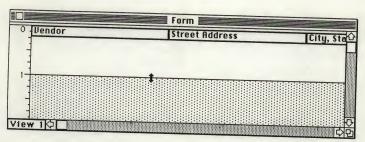
□ Pull down the Form menu and select List Helper.

This removes the check from List Helper and give you a non-List Helper form.

- Move the mouse pointer to the bottom line of any field in the form window, just above the patterned hide area.
- □ When the mouse pointer looks like this:



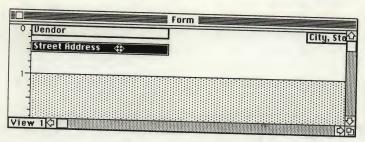
drag the top of the patterned hide area down to the 1-inch mark on the ruler and release the mouse button.



Standard mailing labels are one inch high. Dragging the hide area down gives you the space you need to rearrange the fields for the label.

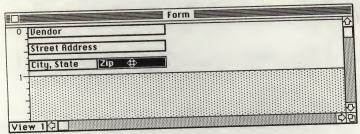
Next, arrange the address fields.

Position the mouse pointer on the Street Address field, hold down the mouse button, drag the Street Address field below the Vendor field, and release the mouse button, so your form looks like this:



- Position the mouse pointer on the City, State field, hold down the mouse button, and drag City, State below the Street Address field.
- □ Select the Zip field and drag it alongside the City, State field.

Your form window now looks like this:



The last things you need to do to this form are to make the printing boldface so the labels are easy to read, and to remove the borders from the fields. Boxes around the fields aren't attractive when the labels are printed.

- □ Choose Select All from the Edit menu so that these changes affect all the fields.
- □ Choose Format Field... from the Form menu. Click on the X in front of Border in the Style box to remove the border.
- □ Click an X in front of Bold in the Style box to have the labels printed in boldface type, then click the OK button.

That's all there is to setting up the label form. Now all that's left is to click in the datafile window to make it active, click an insertion point in the first Vendor field, and enter names and addresses of vendors. The Vendor datafile for Cycles Unlimited looks like this:

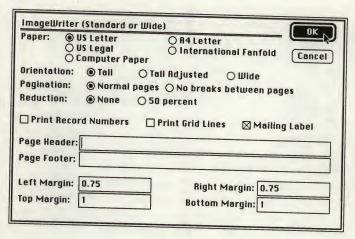
*	File Edit Form Organize
	Vendors Vendors
1	Bicycle Centre
	115 Front Street
	Tacoma, WA 98227
2	Otter Point Bike Supply
	638 W. Division
	Portland, OR 99601
3	Ken's Speciality Cycles
	1417 3rd Street
	Santa Fe, NM 75006
4	Bikes R Us
	2507 Broadway
	Chicago, IL 60612
7/	7신 다

When your vendor file is complete and you're ready to print labels:

 $\hfill\Box$  Choose the Page Setup... command from the File menu.

You probably don't want record numbers or grid lines printed on your labels (the default), so that's what you need to tell File.

- □ Click on the boxes in front of Print Record Numbers and Print Grid Lines to remove the checks from them.
- □ Click the Mailing Label box to put an X in it and click the OK button.



Clicking the Mailing Label box tells File to print each field only as wide as the text contained in the field, regardless of the width of the field boxes, which removes unsightly spaces between fields.

- □ Insert your labels in the printer.
- □ Choose Print Records... from the File menu. When the dialog box appears, just press Return to begin printing.

Pressing Return allows you to quickly bypass the dialog box asking for things such as the number of copies you wish to print because you aren't changing the default options. File begins printing one label for each vendor.

Your labels should now be printing on your printer.

Making the forms was a major task but using them each time you order makes the setup work worthwhile. Having both a paper copy and an electronic copy of your records gives you two methods of tracking your orders.

If you want to check the accuracy and completeness of shipments from vendors as each shipment arrives, you can compare your printed copies of

purchase orders for that vendor.

Using File, your ordering will be consistent and accurate. And File completes gorgeous purchase orders that are easy for you to use and track.

The two tasks small contractors everywhere would like to do better are accurately estimate the cost of potential work by putting together good bids and track the actual cost as the work progresses so they can stay within the estimated cost of work. And they'd like

to do this with a minimal amount of paperwork.

Fred and Ralph Biltwell, owners of Better Builders, are no exception. They've been building custom houses in the Puget Sound area for the last 10 years. Ralph manages the office and Fred does most of the site work. Although Ralph enjoys his work, his passion is fishing and he wants to spend more time in his boat without letting the business suffer. He determined that if he had a computer to help with bidding and tracking costs, he could work both more accurately and, most importantly to him, more quickly. So with some difficulty, he convinced Fred of their need to computerize their bidding and cost-tracking system, and they purchased a Macintosh and Microsoft File. After experimenting, Ralph completed a system to do bidding and track costs that's just right for Better Builders.

The basis of Ralph's system is a Bid Master datafile that contains information about all the tasks involved in building a house, from the foundation to the roof. Then when he's putting together a particular bid, he takes just the items from the Bid Master datafile that are needed in the current bid and fills in the specific information for that particular job. Then he runs a summary report, pastes the totals from this report into a Bid Worksheet, adds figures for allowances and contingencies, and gets a printed bid that's consistent

and accurate.

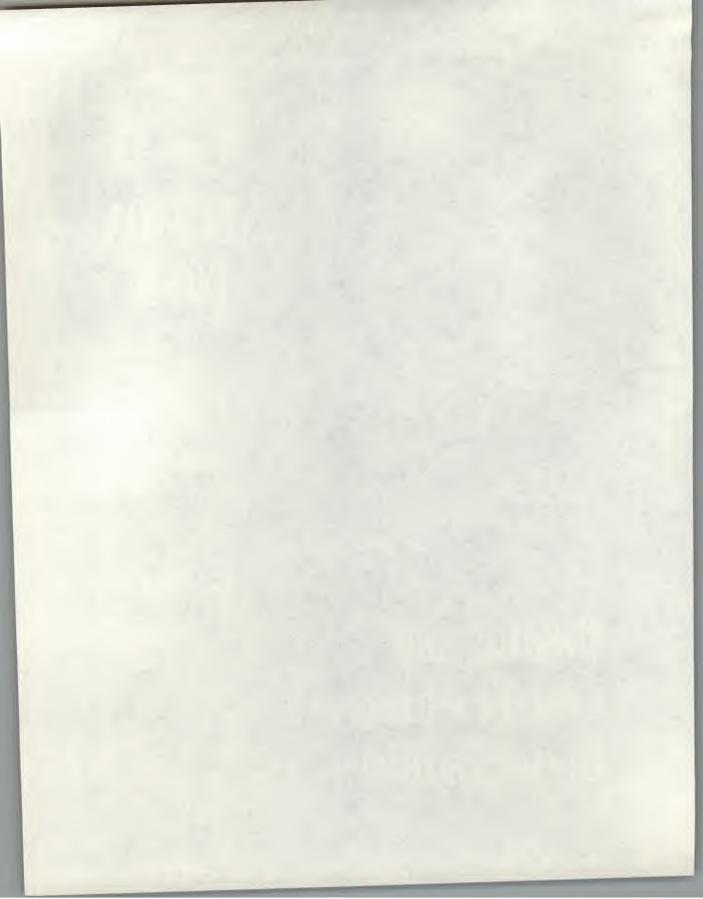
When a bid is accepted and construction begins, Ralph simply makes a copy of the Bid Master datafile, renames it to show it will be used to track costs, adds two fields to store actual costs, and uses it to track costs. Then once a week Ralph runs an invoice-byjob report and puts these totals into the cost-tracking datafile. Now he can obtain a report at any time that compares the current costs of the job to the bid. Using their new system, Ralph and Fred have been able to control costs more effectively. This has resulted in more

profit and more time to fish.

What this section does is show you how to set up a bidding and cost-tracking system like the one Ralph set up. This is a good system for a small construction company, and it fits the way Ralph and Fred work. You can use this system as a starting point to design a system that fits the way you work. If you do many different kinds of construction you may want to set up a bid master datafile for each type: for example, one for houses, one for office buildings, one for churches, one for kitchen remodels, one for decks, and one for solariums. You may wish to record each item on an invoice separately or you may want only the invoice total. If you follow the Better Builders example, you'll end up with a system that's easy to use because it works the way you work and one that makes your bids as accurate as possible and shows your actual costs compared to your bid.

# SECTION FOUR

Bidding and Cost-Tracking: Better Builders





# Bidding

In this chapter, we'll see how Ralph Biltwell of Better Builders sets up the forms and reports he uses to make bids. First, he creates the Bid Master; only the labor and material costs in this datafile change from bid to bid. Then he makes another view of the Bid Master, which he calls the bid detail; in this view, he includes more detail about specific items in the master that apply to the job under consideration. Next, Ralph uses information in the Bid Detail datafile to create a summary report. He then brings information from this report into a Bid Worksheet datafile he's created and uses the worksheet to create a report that serves as the actual bid.

# **Creating a Bid Master Datafile**

The first step in setting up a bidding or cost-estimating system is to construct a Bid Master—a datafile with all the tasks for the type of construction you do. The final printed Bid Master for Better Builders is shown in Figure 7-1.

Each record in the Bid Master should contain a description of each task, the unit of measurement for materials used in completing the task, the number of hours of labor per unit of material, and the costs for labor and materials. The number of hours of labor per unit is a way of assigning a unit of measurement to labor for each task. For example, in the Better Builders Bid Master shown in Figure 7-1, Record 19 (Finish carpentry—Handrails) has a unit measurement of linear feet and a labor per unit of .2, meaning a worker can install one linear foot of handrail in .2 hours. So, at that rate, a worker could install 30 linear feet of handrail in 6 hours.

Figure 7-1. The Bid Master datafile for Better Builders

7	Task	Bescription	Units	Labor per Unit	Labor per Hoar	Matri Unit Cost
- 1			lin ft	0.05	\$12.00	\$100.00
	Cabinets		lin ft	0.11	\$12.00	\$78.00
	Cabinets		lin ft	0.07	\$12.00	\$85.00
	Cabinets			2	\$18.00	\$43.85
4	Concrete Finishing		ou yd	0.003	\$18.00	
5	Concrete Finishing	Steel Troweling	sqft	0.002	\$18.00	\$14.00
	Concrete Finishing	Wood Float	sqft	2	\$14.00	
<u>6</u> _	Doors	Hann interior door (heavy weight)	each	1.6		
<u>_</u>		Hand interior door (light weight)	each	1.0		\$70.00
8_	Doors	locatell frame fit hand and trim Exterior	each	5		\$55.00
9	Doors	Install frame, fit hang and trim INTERIOR	each	0.8		\$30.00
0	Doors	Install mortise look set	each	0.6	\$14.00	\$10.00
Ц.	Doors	Set Door Frame	each	0.002		\$0.46
	Doors	1/2" sheetrock on ceiling	sqft			\$0.39
	Dryvall	3/8" sheetrock on walls	sqft	0.001		\$0.80
14	Drywall	#12 sheathed	lin ft	0.0035	\$25.00	\$300.00
15.	Electrical	Meter and Main Panel	each			\$0.80
	Electrical	Switches and Receptacles	each	0.3		\$0.50
	Electrical	1 10/4/ 146 (+109 mitered corners)	bdft	0.003	4	
18	Exterior Siding	Bevel Siding, 1x8 (+10% mitered corners)	bdft	0.003		
19	Exterior Siding	Beyel Staing, 1x8 (+10x Illiter to some	bdft	0.003		
20	Exterior Siding	Board & Batton 1×10	bdft	0.003		
21	Exterior Siding	Board & Batton 1x8	soft	0.00		
22	Exterior Siding	Wood Shingles 16"	lin ft	0.		
23	Finish oarpentry	Handrails	lin ft	0.000	6 \$14.00	
24	Finish oarpentry	Molding 1×2	lin ft	0.0	2 \$14.00	\$0.8
25	Finish oarpentry	Window wrap 1x4	squd			\$11.0
26	Floors-carpet		sq ft	0.07	8	\$0.8
27		oeramio tile	bdft	0.004	5	\$1.1
쇎	Floors-hardwood	Hardwood 1x2	soft	0.001	5	\$0.7
20	Floors-viny1	Viny1	soft	0.00	8 \$10.00	
47	Foundation	Footings	sqft	0.0	\$10.00	
31		Foundations and Walls	sqft	0.00	8 \$10.00	
	Foundation	Slabs on Fill	each		.5 \$13.00	
	Garage doors	overhead		0.08		\$3.0
3.	Grading and Fill	all areas	cu yd	0.000		\$0.8
24	Insulation	Batt insulation between joists & rafters	sqft	0.00		\$0.5
٠.	5 Insulation	Batt insulation stapled between wall study	sqft	0.0	70.0.	

continued

	Task	Bescription	Units	Labor per Unit	Labor per Hear	Matri Unit Cast
						\$700.00
	Daniele Bantele		tot			\$50.00
<u> </u>		Site	tot	5	\$15.00	\$125.00
38_		Install Bath tub and Shower	each	3.5		\$65.00
39		Install Lavatory - ordinary grade	each	3.5		\$50.00
40	Plumbing fixtures	Install Water closet - ordinary grade	each			\$175.00
41	Plumbing fixtures	Roughing in Bath tub and Shower	each	9		\$350.00
			each	60		\$1,500.00
43	Plumbing rough & trim	Roughing in one story house complete	each			\$900.00
44	Plumbing rough & trim	Roughing in Solar htr	each	4.75		\$100.00
45	Plumbing rough & trim	Courting in Water closet	each	9		\$1,200.00
46	Plumbing rough & trim	Roughing in Water closet	each		\$15.00	\$75.00
47	Plumbing Solar Water I	52 gal electric	each	4.25	\$20.00	\$30.00
48	Plumbing Water htr	t and the sale	lin ft			\$24.50
	Retaining wall		per square			\$24.50
	Roofing	Asbestos-coment, rectangular (plain roof)	per square			\$41.00
	Roofing	Built-up 5-Ply	per square			
	Roofing	Corrugated aluminum on wood	per square	3.	-	
	Roofing	Corrugated steel on wood	per square			
	Roofing	Hand Split Shake (out up roof)	per square			
	Roofing	Hand Split Shake (plain roof)	per square			
	Roofing		per square	1.		
	Roofing	Roll Roofing	set	0.001		
56	Rough Carpentry	Bridging, metal Bridging, wood 1x3 out on job	set			
59	Rough Carpentry	Bridging, wood 1x3 redi-out	set			
60	Rough Carpentry	Bridging, Wood 1x3 red out	set			
61	Rough Carpentry	Bridging, wood solid Composition roof decking 1/2" insulating	sqft	0.001		
69	Rough Carpentry	Composition sheathing 1 1/2" insulating	sqft	0.002		
63	Rough Carpentry	Furring on masonry including shimming	lin ft	0.00		
64	Rough Carpentry	Furring on masonry inclouding stratuming	lin ft	0.00		
65	Rough Carpentry	Furring on studding	bdft	0.002		
6	5 Rough Carpentry	Girders built from 2" stook	bdft	0.002		
6	7 Rough Carpentry	Joists 2x10	bdft	0.003		0
6	Rough Carpentry	Joists 2×12	bdft	0.003		
6	Rough Carpentry	Joists 2x6	bdft	0.00		
	Rough Carpentry	Joists 2x8	sqft	0.00		
15	1 Rough Carpentry	Plywood roof decking 1/2" flat roof	sqft	0.00	19 \$13.0	0 \$0.4
15	2 Rough Carpentry	Ply wood roof decking 5/8" out up roof	Isdi			

continued

	Task	Description	Units	Labor per Unit	Labor per	
43	Rough Carpentry	Plywood roof decking 5/8" gable roof	- 4	Dilli	Nour	Unit Cast
42	Rough Carpentry	IPN wood sheathing 1/2"	sqft	0.0017	\$15.00	\$0.45
<del>/2</del>	Rough Carpentry	Plywood sheathing 3/8"	sqft	0.0002	\$13.00	\$0.40
49	Rough Carpentry Rough Carpentry	Plywood sheathing 5/16"	sqft	0.0017	\$13.00	\$0.35
46	Rough Carpentry	Plywood subflooring 3/4"	soft	0.0015	\$13.00	\$0.38
48	Rough Carpentry	Ply wood subflooring 5/8"	sqft	0.0017	\$13.00	\$0.65
63	Rough Carpentry	Rafters 2x6 flat roof	bdft	0.0013	\$13.00	\$0.50
9V	Rough Carpentry	Rafters 2x6 gable roof	bdft	0.0027	\$13.00	\$0.27
82	Rough Carpentry	Rafters 2x6 hip roof	bdft	0.0031	\$14.00	\$0.27
2	Rough Carpentry	Rafters 2x8 flat roof	sqft	0.0034	\$14.00	\$0.27
0.4	Rough Carpentry Rough Carpentry	Rafters 2x8 gable roof	bdft	0.0027	\$13.00	\$0.36
0 <del>4</del>	Rough Carpentry	Rafters 2x8 hip roof	bdft	0.0031	\$13.00	\$0.36
2	Rough Carpentry	Sills & Plates	bdft	0.0034	\$13.00	\$0.36
30 1	Rough Carpentry	Studs 2x4 @ 16" O.C.	bdft	0.0022	\$13.00	\$0.40
36 1	Rough Carpentry	Studs 2x6 @ 16" O.C.	bdft	0.0027	\$13.00	\$0.27
00 1	Rough Carpentry	Subflooring 1x4	bdft	0.0029	\$13.00	\$0.34
2 1	tough Carpentry tough Carpentry	Subflooring 1x6	bdft	0.002	\$13.00	\$0.30
1	rindows-aluminum	Subflooring 1x8	bdft	0.0017	\$13.00	\$0.35
3	Indows-aluminum	Install Aluminum	each	0.0017	\$12.00	\$0.41
	'indows-weatherstri	Weatherstripping	each	2	\$12.00	\$80.00
PEL	moows-wood	Install Wood window	each	2	\$12.00	\$1.70
			reaon	6.5	\$14.00	\$70.00

As you can see, this system includes both materials and labor with each task. You can separate them if you wish. But I decided to put them together because sometimes it's necessary to make substitutions in the materials used. For example, you may need to substitute  $1 \times 6$  beveled siding for  $1 \times 8$  beveled siding. If you keep the labor separate from the materials, most likely when you update your figures you'll change the cost of the materials to reflect  $1 \times 6$  siding, but you may neglect to change the labor. Since  $1 \times 6$  is more expensive to install than  $1 \times 8$ , you may overrun your bid. If, on the other hand, you keep a labor-per-unit figure with each task and material, when you change one, the change will be reflected in the entire task and long-term accuracy will improve.

Two fields (Labor per Hour and Matrl Unit Cost) are the only fields in the Bid Master that may change from bid to bid. Before you copy the Bid Master for a new bid, you'll need to update the labor and material costs based on your experience with your last job. Both the accuracy of your bid and your profit margin will depend on the accuracy of these figures. If, for example, the price of lumber

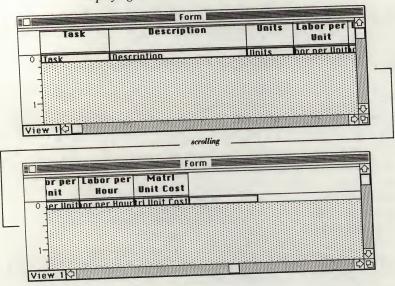
drops and you don't change your material costs, chances are you will be underbid and not get the job. If labor costs rise and you don't change the rates in your labor-per-hour field, your profit margin may be non-existent.

You can use the Bid Master to store all the tasks involved in construction. Then, when it's time to submit a bid, you won't need to start from scratch. You have a detailed list of tasks. All you'll need to do from job to job is update labor and material costs, delete the tasks from the list that don't apply to the specific job you're bidding on, and all your bids will be consistent because the labor per unit stays the same from bid to bid.

#### **Creating the Bid Master Form**

Constructing the form for the Bid Master is a simple task. It's a good idea to use File's default List Helper form so you can see as many records as possible on the screen at once. The Bid Master form you'll create in this chapter is shown in Figure 7-2.

Figure 7-2. The form window, scrolled left and right, displaying the Bid Master form



 $\hfill\Box$  Start File by double-clicking on the File icon.

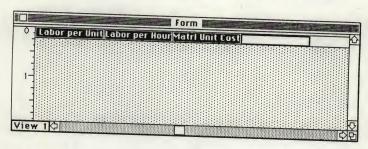
Insert a blank disk in your external drive, initialize it if necessary, and name it something descriptive like Bid Data.

- ☐ Type Bid Master as the name of your datafile, click the Drive button if necessary to save it on your Bid Data disk, and click the New button.
- □ Enter the following six fields in the form window:

Information Type
Text
Text
Text
Number
Number
Number

Now, change the font to a smaller size for all the fields so a lot of records will fit in the datafile window at once.

□ Choose Select All from the Edit menu to select all of the fields.



□ Choose Set Font... from the Form menu.

You'll see a dialog box that looks like this:

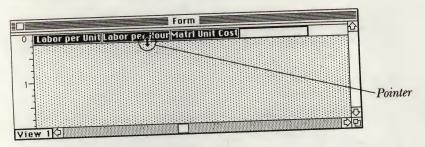


□ Click on the 9 to choose Geneva font in the 9-point size (Geneva is the default font), then click the OK button.

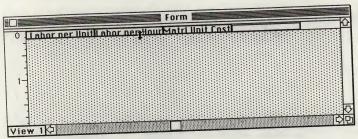
Now when you add information to the Bid Master in the datafile window, the information will appear on the screen in smaller type. Because you're using a smaller type size, you can make your records a little narrower.

To make the records narrower so that you can see more records on the screen at once:

- ☐ Move the mouse pointer to the bottom of any one of the fields in the form window.
- ☐ When the pointer looks like this:



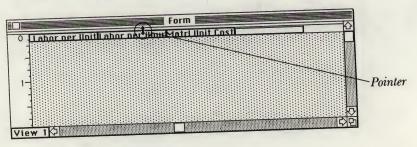
drag the bottom line up about a sixteenth of an inch and release the mouse button.



Now when you view the records in the datafile window, you should be able to see 22 records rather than the default 17 records at once.

If you want to be fancy and add longer headings in a different typeface so they really stand out, here's how to do it:

- ☐ Move the mouse pointer to the top of any field in the form window.
- ☐ When the mouse pointer looks like this:



grab the top of one of the fields in the form window, drag it down to the ½-inch mark on the ruler on the left side of the form window, and release the mouse button.

Labor per Unit	Labor per Hour	Matri Unit Cost	
or ner Unit	l ahor ner Hour	Matri linit Cost	

Notice that this opens up a heading area in the form window that is separate from your fields and exposes the label File has created for each field. Now if you wish, you can format the labels, but leave the field names the same. For instance, you can change the font of the labels while leaving the fields in 9-point Geneva.

□ Select all of the headings by first moving the mouse pointer to the blank area just to the right of the Matrl Unit Cost heading.

or ner Unit Ahor ner HourMatri Unit Cost	Labor per Unit	Labor per Hour	Matri Unit Cost	A
	ahor ner Unit	Lahor ner Hou	Matri Unit Cost	
	5		8 - 898888000	

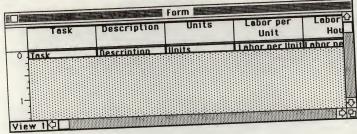
☐ Hold down the mouse button and drag the selection rectangle that appears slightly down and to the left across all the headings.

As you drag the selection rectangle across the headings you should see a selection box traveling with you.

OIII A	Hour	Matri Unit	
Lahor ner Unit	l ahor ner Hour	Matri Unit Cost	
		1001	HOLD CONTRACTOR CONTRA
161			

□ When you get to the left edge, check to make sure the rectangle isn't touching the regular fields, then release the mouse button.

Once you have selected the headings, the bar at the top of the heading area darkens.



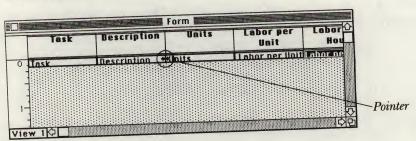
- □ Choose Set Font... from the Form menu.
- □ Click on Chicago and click OK.

To format Labor per Hour and Matrl Unit Cost as dollar fields:

- □ Scroll the form window to the right until both fields are visible.
- Click on the Labor per Hour field to select it. Hold down the Shift key and click on the Matrl Unit Cost field.
- □ Choose the Format Number Field... command from the Form menu or double-click on one of the selected fields. When the dialog box appears, click the Dollar button in the Display box, then click the OK button.

The last step in making the Bid Master form is to size the fields so that you can see all the information in each of the fields and so that as many fields as possible are visible in the datafile window. To do this:

- □ Scroll the form window all the way to the left.
- ☐ Move the mouse pointer to the right edge of the Description field.
- □ When the pointer looks like this:



drag the right edge of the Description field to the right until the Description field is about twice as long. Release the mouse button.

Shorten the Units field by dragging the right edge to the left until it's about two-thirds of its original size. □ Shorten the Labor per Unit, Labor per Hour, and Matrl Unit Cost fields in the same way.

Your completed Bid Master form should look like the form in Figure 7-2.

□ Choose Save Form from the File menu to save the Bid Master form you just made with the Bid Master datafile as your view 1 form.

# **Entering Bid Master Information**

The next step is for you to enter tasks in the datafile window of your Bid Master datafile. This is the foundation of your bidding system. You'll use this datafile to jog your memory about items you need to make an accurate bid. If you're an experienced contractor, you know what tasks to include in a bid; just be sure your list of tasks is as complete as you can make it now. The more complete this list, the less likely you will be to overlook items that should be included in your bids. Later, when you're constructing bids, if you find tasks you forgot to include, you can add those tasks then. But the important thing is not to forget tasks that should be included in a bid. Forgetting to take all tasks into account when computing a bid price can have a disastrous effect on profit.

If you need help with identifying items that should be included in your Bid Master datafile, you may find these books useful:

- Building Construction Cost Data, Robert S. Means Company, Dukesbury, MA
- Handbook of Tables and Formulas for Home Construction Estimates, Paul I. Thomas, Prentice Hall
- Home Construction Estimates, Stanley Badzinsky, Prentice Hall

When you're entering data in the units field, pick a unit that you're comfortable with and then stick with it for the other fields that use the unit of measurement. Ralph used linear feet as the unit of measurement for cabinets because that's how he and Fred normally figure cabinets. You may be more comfortable with square feet of countertop. It doesn't matter what unit of measurement you use—square feet or linear feet—as long as you're consistent and the unit is commonly used in your type of business. If you use linear feet for Labor per Unit, make sure you use linear feet for Matrl Unit Cost and the estimated amount.

To calculate a number for the Labor per Unit field, here's what to do. In our example, base cabinets come in units of linear feet. Consider how many linear feet of base cabinets a crew can hang in an hour. Ralph and Fred's crew of two workers can hang 20 linear feet of base cabinets in an hour. To calculate how long it takes the crew to hang one linear foot, simply divide 1 by 20. Your answer (.05) is the Labor per Unit figure for base cabinets in the Bid Master.

The Labor per Hour field contains the hourly rate in dollars for a worker doing the task. The Matrl Unit Cost field contains your cost per unit of material (for example, the cost per square foot of ceramic tile).

Your business will most likely be different from Better Builders, but you can still use the Bid Master in Figure 7-1 as a model. If you use any of the specific tasks and figures, be sure to check the labor-per-unit figures against your own experience. Your Bid Master should match your geographical area and situation. Better Builders' figures are realistic for them, but each business is unique and you won't get accurate bids without accurate figures in this column.

The important thing is not that your Bid Master matches the Better Builders example exactly, but rather that you understand the methodology: using File and the Mac to start with a Bid Master, then making a specific bid, and, finally, how to use the bid information to track the job costs, which we'll explore in Chapter 8.

### The Bid Detail Form

The next step is to use the Bid Master datafile and make a second form to use when you actually bid on a project. This form is simply the Bid Master form with three additional fields. You use it each time you put together a new bid. To make a bid detail form:

- □ Choose Show Form from the Form menu.
- □ Click in the View 1 box in the lower left corner of the form window to change from view 1 to view 2.

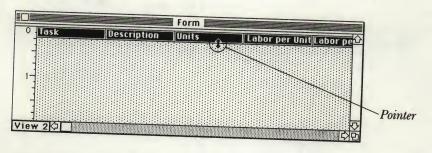
		Description	Units	Labor per Unit	abor pe	
	Task		lin ft	0.05		
1		0000		0.11		
2	Cabinets	010111000	lin ft	0.07		
3	Cabinets	Vanity	lin ft	2		
4	Concrete Finish	Slabs on Fill, si	cu ya	0.003		
5	Concrete Finish	Steel Troweling	sqit	0.002		
6	Concrete Finish	Wood Float	sqit	0.002		
-	Doors	Hang interior d	each			
			Form			× 7° 1.
	Took	Description	Units	Labor per Unit	Labor he	View b
0	Task					
	<u> </u>			سسنسسد		
	1			سبسنبسيد		
	1		سيسبيد			
1.	1		سيستنسب			
	-	سنبسند				
	1	ستستبسيد.			-	

Remember, File stores two forms with each datafile and these are the two views you can switch between by clicking the view box.

Notice that when you change the form window to view 2, all formatting is lost. The next step, then, is to reformat the view 2 form window.

- □ Click in the Task field to select it.
- □ Choose Select All from the Edit menu.

- □ Choose Set Font... from the Form menu.
- □ When the dialog box appears, click on 9 to change the font size from 12-point Geneva to 9-point Geneva. Click the OK button.
- ☐ Move the mouse pointer to the top of the hide area until the pointer takes on this shape:



□ Hold down the mouse button and move the top of the hide area up approximately a sixteenth of an inch to make the records narrower so more records can be viewed at once in the datafile window. Release the mouse button.

		Bid Master	
Tas	k Description	on Units	labor por II-id
1 Cabinets	Base	lin ft	Labor per UnitLabor pe
2 Cabinets	Overhead	lin ft	0.05
3 Cabinets	Vanity	lin ft	0.11
4   Concrete Fini	ishing Slabs on Fill, side	walkound	0.07
5 Concrete Fini	isning   Steel Troweling	sqft	2
6 Concrete Fini	ishing Wood Float	soft	0.003
7 Doors	Hang interior door	Cheleach	0.002
B Doors	Hang interior door	(lideach	2
Doors	Install frame, fit	handeach	1.6
O Task	Description	Illnits 1	Hahor ner Unit Lahor ne

Now add the fields you need to complete a detailed bid. The fields you need to add are:

### • Area Desc

This field specifies the area of the house where the task will be done. For example, it indicates whether the carpet is for the living room or the downstairs den or all floor areas.

### • Est. Amnt

This field contains the number of units of material needed for the task (for example, 40 linear feet of handrails).

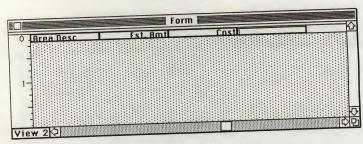
### Cost

This field calculates the cost of the task based on the material and labor costs you've entered.

To add these fields to the Bid Detail form:

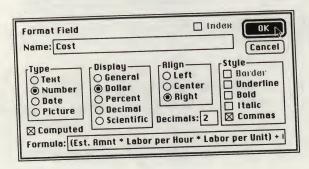
- □ Scroll the form window to the right.
- Click in the empty field just to the right of Matrl Unit Cost and add the following fields and their information types:

Field Name	Information Type
Area Desc	Text
Est. Amnt	Number
Cost	Number



To add a formula that computes the cost of each task:

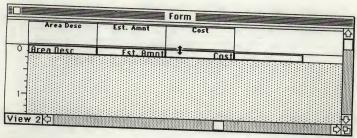
- □ Double-click on the Cost field.
- □ When the dialog box appears, click the Dollar button in the Display box, click the Computed box, and click in the Formula typing field.
- □ Type (Est. Amnt \* Labor per Hour \* Labor per Unit) + (Matrl Unit Cost \* Est. Amnt) as your formula and click OK.



File will use this formula to compute the labor costs and add these to the material costs.

Now you need to drag the top of the form down, just as you did for the View 1 form, to expose the field headings.

- $\hfill\Box$  Position the mouse pointer at the top of any field.
- □ Hold the mouse button down and drag the horizontal line that appears as you start dragging down to the ½" mark on the ruler. Release the mouse button.

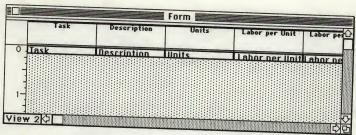


Next, change the font of the field headings so they match the headings in your View 1 form.

- Position the mouse pointer in the blank area to the right of the Cost field heading.
- □ Hold down the mouse button, and drag the selection rectangle that appears as you start dragging to the left until you have covered all the field headings.

Make sure the rectangle doesn't cover the fields or you will select them as well.

☐ Release the mouse button.

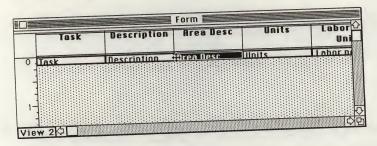


Notice that the small bar at the tops of the field headings has darkened to indicate they are selected.

- □ Choose Set Font... from the Form menu.
- ☐ In the dialog box, click on Chicago, then click on 12 to select 12-point Chicago type. Click the OK button.

Next, move the Area Desc and Est. Amnt fields so that they are next to the Description field.

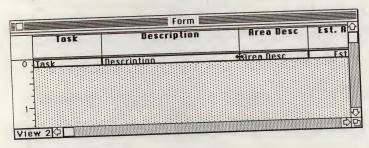
- □ Scroll the form window to the right until the Area Desc field is visible.
- □ Position the mouse pointer over the Area Desc field, hold the mouse button down, and drag the field to the left until the vertical line that appears as you start dragging is on the right side of the Description field. Release the mouse button.



□ Now drag the Est. Amnt field to the left until the vertical line that appears as you start to drag is on the right side of the Area Desc field. Release the mouse button.

Finally, size the fields just as you did for your view 1 form.

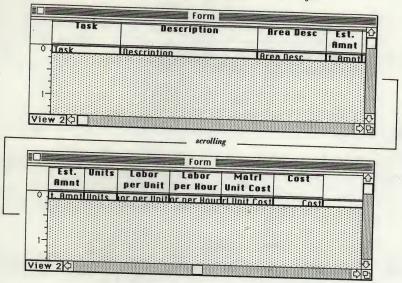
□ Lengthen the Description field to twice its current length.



- □ Shorten the Est. Amnt and Units fields to half their original size.
- □ Shorten the Labor per Unit, Labor per Hour, and Matrl Unit Cost fields by about a quarter of an inch.
- □ Shorten the Cost field to two-thirds of its original length.

Your view 2 form should now look like the form shown in Figure 7-3.

Figure 7-3. The view 2 form for the Bid Master datafile



Next, restore the Dollar display format to the Labor per Hour and Matrl Unit Cost fields.

- □ Click on the Labor per Hour field to select it.
- □ Hold down the Shift key and click on the Matrl Unit Cost field.
- □ Choose Format Number Field from the Form menu, click on the Dollar button, then click the OK button.
- ☐ Choose Save Form from the File menu.

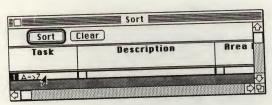
File saves this form as view 2 of the Bid Master. We'll use this form when we put together our sample bid.

## The Summary Report

Next you need to set up a summary report that organizes all of the tasks in your Bid Master by general categories and also provides totals for these general categories. For example, it will put all the tasks involved in building the foundation together and give you a total for the foundation. When you do an actual bid, you'll select tasks from the Bid Master and put these in the Bid Detail form. Then you'll use the information in the Bid Detail (which contains only the tasks involved in the job you're bidding on) to create a summary report. The summary report will total all the categories of work, and it's these totals from this summary report that you'll use in your actual bid.

To set up a summary report:

□ Choose Sort... from the Organize menu and click in the Task field.



The 1 tells you Task is the first sort criterion. The A - > Z tells you the tasks will be sorted in ascending alphabetical order.

□ Click the Sort button.

Now when you choose the Report... command, your datafile will be sorted by task, the way you want it.

□ Choose Report... from the Organize menu.

The report window will look like this:

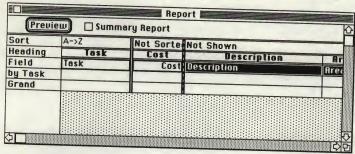
Previe	_ Summ	nary Report	
Sort Heading	A->Z Task	Not Sorted  Description	Area Desc
Field	Task	Description	Area Desc
by Task			
Grand			

Notice that Task is the first field in the left column and is in the Sort area of the report window because you used the Sort... command before you opened the report window (File puts all sorted records into the Sort area of the report window). You can also sort after opening the report window. If you decide you don't want to sort by task, for instance, you can select the Task field in the Field row and drag it into the Not Sorted area, or you can drag additional fields into the Sort area and File will sort them before it prints the report.

The next step is to move all the fields except Task and Cost (the only two fields you need in your report) into the Not Shown area.

- Click on the Description field in the Field row. Hold down the Shift key and click on the Area Desc, Est. Amnt, Units, Labor per Hour, Labor per Unit, and the Matrl Unit Cost fields.
- □ Hold down the mouse button and drag these fields to the right until the vertical line that appears as you start to drag is in the Not Shown area.

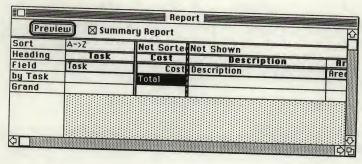
Scrolled all the way to the left, your report window should look like this:



Now to put totals in the Cost field:

- □ Double-click in the Cost column and the By Task row.
- □ Click in the Total box and click OK.
- □ Now click an X in the Summary Report box.

Your report window will look like this:



□ Choose Save Report from the File menu.

That's all there is to creating the summary report. You don't need to print the report now because you first need to finish setting up your bidding system. You need to save the summary report with the Bid Master datafile so you can use it when you actually make your bids.

## **Making the Bid Worksheet**

The next step is to make the Bid Worksheet datafile. Right now you just need to make the form. Then, when you do a bid, the worksheet will be ready for you to load information from the summary report into the Bid Worksheet.

To make a Bid Worksheet:

- □ Click in the datafile window to make it active.
- □ Choose New Datafile from the File menu and type Bid Worksheet as the name of this datafile. Click the New button.

□ Enter the following fields and information types in the form window:

Field Name	Information Type
Task	Text
Base Cost	Number
Allowance	Number
Cntgcy%	Number
Cntgcy Amt	Number
Subtotal	Number
Tax%	Number
Tax	Number
Bid Total	Number

Now format the Base Cost and Allowance fields for Dollar display format.

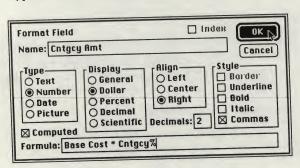
- □ Scroll the form window all the way to the left.
- □ Click on the Base Cost field.
- ☐ Hold down the Shift key and click on Allowance.
- □ Choose the Format Field... command from the Form menu.
- ☐ In the dialog box, click on the Dollar button, then click the OK button.

Next, format the Cntgcy% field for Percent display.

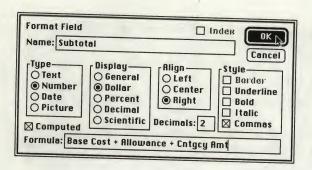
- □ Double-click on Cntgcy%.
- □ In the dialog box, click on the Percent button, then click the OK button.

Now enter your formulas for the Cntgcy Amt, Subtotal, Tax, and Bid Total fields.

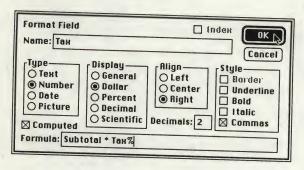
- □ Double-click on Cntgcy Amt. When the dialog box appears, click the Dollar button, the Computed box, and in the Formula box.
- □ Type Base Cost \* Cntgcy% as your formula and click OK.



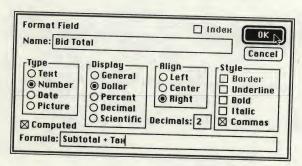
- □ Double-click on Subtotal. When the dialog box appears, click the Dollar button, the Computed box, and in the Formula box.
- □ Type Base Cost + Allowance + Cntgcy Amt as your formula and click OK.



- Double-click on Tax. When the dialog box appears, click the Dollar button, the Computed box, and in the Formula box.
- ☐ Type Subtotal \* Tax% as your formula and click OK.



- Double-click on Bid Total. When the dialog box appears, click the Dollar button, the Computed box, and in the Formula box.
- $\Box$  Type Subtotal + Tax as your formula and click OK.



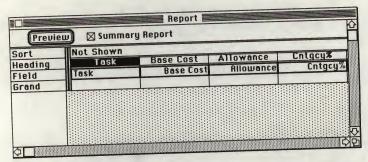
That's all there is to making the Bid Worksheet form. Later, after you've entered data, you may wish to size some of the fields so they match the lengths of the data you're entering.

## The Bid Report

The last thing you need to do to your bidding system is to set up the report that will be your actual printed bid. What this report does is take the information in the Bid Worksheet and print it with totals at the bottom.

To set up the bid report:

□ Choose Report... from the Organize menu.



Note that all fields are placed in the Not Shown area of the report. This is because the report window hasn't been reset from the last datafile (note that the Summary Report box is still checked). To reset the report window:

□ Choose New Report from the File menu.

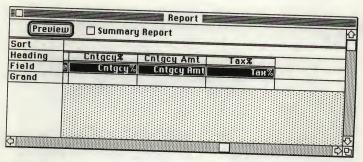
Previe	w Summa	ry Report		
Sort Heading	Not Sorted Task	Base Cost	Allowance	Cntgcy%
Field	Task	Base Cost	Allowance	Cntgcy%
Grand				

Now all the fields are in the Not Sorted area of the report window. The Summary Report box is still checked, but you don't want this particular report to be a summary report.

 $\hfill\Box$  Click in the Summary Report box to remove the check from it.

The Allowance, Cntgcy%, Cntgcy Amt, and Tax% fields contain information the customer doesn't need to see, so let's move these fields to the Not Shown area.

- □ Select Allowance in the Field row. Hold down the Shift key and select Cntgcy%, Cntgcy Amt, and Tax%.
- Drag these fields to the right until the vertical line that appears as you start to drag is in the Not Shown area. Release the mouse button.



Next you need to provide for grand totals (which the customer WILL want to see). To add grand totals:

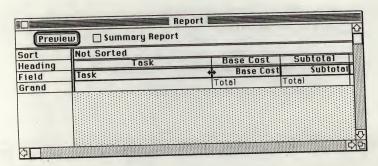
- □ Scroll the report window all the way to the left.
- □ Double-click in the box at the intersection of the Base Cost column and the Grand row. When the dialog box appears, click on the Total box and click OK.



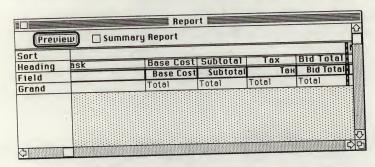
☐ Do the same for Subtotal, Tax, and Bid Total.

Finally, size the report fields to accommodate the information they will contain.

- □ Scroll the report window all the way to the left.
- □ Place the mouse pointer on the right side of the Task field in the Field row.
- □ Hold the mouse button down and drag to the right until the Task field is twice as wide as when you started dragging. Release the mouse button.



□ Now reduce the size of the Base Cost, Subtotal, Tax, and Bid Total fields by about one-third. Your report window should look like this:



☐ Choose Save Report from the File menu and the report will be saved with the Bid Worksheet datafile.

## **Making Your First Bid**

Now that Ralph has the bidding system completely set up, he's going to show Fred how it works. They've just come back from looking at a job they're interested in bidding on, a house for the Faradays. We'll look over Ralph's shoulder as he shows Fred how to use File to make a bid.

First Ralph shows Fred the Bid Master datafile. They look at a copy of the Bid Master with the Faraday house in mind and delete those items not included in the Faraday project: They delete tasks for decking, a rockery, and special exterior siding and roofing because the Faraday house won't include those features. Next Ralph switches to view 2 (the Bid Detail form) and enters information for the specific project in these fields. Then he creates a summary report and copies information from it into the Bid Worksheet. Finally he adds the necessary information to complete the Bid Worksheet and prints the Faraday bid.

For your own bids, start by first updating the labor-per-hour and material costs in the original Bid Master datafile. Whenever you're working on a project, if you notice that either material or labor costs have changed since the last time you purchased the materials or hired the labor, jot this down somewhere, so you can keep track of labor and materials changes you need to make in your Bid Master. Then when you update the Bid Master, you can quickly go to just the tasks where material or labor costs need changing. Also, if your costs come in significantly higher or lower than your bid, you can use this information to update the labor and material costs in your Bid Master and you can more accurately track the cost of the project (we'll look at tracking costs in Chapter 8).

Then make a copy of the Bid Master datafile. You use the copy when you work on a bid. That way you can change information in the datafile for the specific project and leave the Bid Master datafile intact for future bids.

It is easiest to update the Bid Master datafile if you first sort it alphabetically by task. That way similar tasks will be grouped together and it will be easier to find the ones you need to update.

- ☐ Start File and load your Bid Master datafile.
- ☐ Hold down the Command key and press T to toggle to the view 1 form.
- □ Choose Sort... from the Organize menu.
- □ Click the Clear button to clear previous sort criteria.
- □ Click in the Task field.



You should see a 1 in the small box on the left of the Task field, indicating this is your primary sort, and A -> Z in the large box to the right, indicating the records will be sorted alphabetically.

- □ Click the Sort button and the records will be sorted by task.
- □ Now scroll through the datafile and update any labor or material figures.

When you're finished updating the Bid Master, you're ready to make a copy of it to use for a specific bid. To make a copy of the Bid Master, first quit File and return to the Mac desktop.

- □ Choose Quit from the File menu.
- □ Click on the Bid Master to select it and choose Duplicate from the File menu.

The Mac will make you a copy and name it Copy of Bid Master.

□ Since Copy of Bid Master is already highlighted, simply type the name of the bid then press the Return key. (In our example, we have named it Faraday Bid Master.)

This is the datafile you'll use to generate the bid.

□ Double-click on the Faraday Bid Master icon to open it.

You now have a datafile called Faraday Bid Master that looks exactly like your Bid Master. The first step is to delete items in the Bid Master that are not included in the Faraday project.

Our example shows a subset of tasks for the Faraday house. What they want is a no-frills house on a level lot with no deck, a flat roof, only carpeted or vinyl floors, and aluminum windows. So we need to go through the Faraday Bid Detail datafile and delete tasks that aren't part of this project.

- □ Delete those items that don't apply to the project you're bidding on by clicking on the record number of the task you want to delete, holding down the Option and Command keys, then pressing the Backspace key.
- Figure 7-4 shows the items that apply to the Faraday bid.
  - □ Hold down the Command key and press T to toggle to the view 2 form.
  - □ Now enter information for your bid.

Figure 7-5 shows the sample information entered for the Faraday bid.

You've done the hard part—entered all the specifics for a job. Now it's File's turn to work and turn this information into a bid worksheet that will become your actual bid. This is the easy part. All you need to do is run the summary report you created earlier, save the totals as a text-only file, and bring them into your Bid Worksheet datafile.

Figure 7-4. A printout of the Faraday Bid Master datafile

	Task	Bescription	Units	Labor per Voit	Labor per Naur	Matri Unit Cast
1	Cabinets	Base	lin ft	A 05		
_2	Cabinets	Overhead	lin ft	0.05	\$12.00	\$100.00
_3	Cabinets	Vanity	lin ft	0.11	\$12.00	\$78.00
4		Slabs on Fill, sidewalks, driveways etc.	ou ud	0.07	\$12.00	\$85.00
_5	Concrete Finishing	Slabs on Fill, sidewalks, driveways etc.	ou ud	2	\$18.00	\$43.85
_6	Concrete Finishing	Slabs on Fill, sidewalks, driveways etc.	ou ud	2	\$18.00	\$43.85
	Doors	Hang interior door (heavy weight)	each	2	\$18.00	\$43.85
B		Hang interior door (light weight)	each	2	\$14.00	
9		install frame, fit, hang and trim EXTERIOR	each	1.6	\$14.00	
	Doors	install frame, fit hang and trim INTERIOR	each	6	\$14.00	\$70.00
11		Install mortise look set	each	5	\$14.00	\$55.00
	Doors	Set Door Frame	each	0.8	\$14.00	\$30.00
	Drywall	1/2" sheetrook on ceiling	sqft	1	\$14.00	\$10.00
	Drywall	3/8" sheetrook on walls		0.002	\$16.00	\$0.46
	Electrical	812 sheathed	sqft	0.001	\$16.00	\$0.39
16	Electrical	Meter and Main Panel	lin ft	0.0035	\$17.00	\$0.80
	Electrical	Switches and Receptacles	each	4	\$25.00	\$300.00
18	Exterior Siding	Bevel Siding, 1x6 (+10% mitered corners	each	0.35	\$17.00	\$0.80
19	Finish carpentry	Handrails		0.0039	\$8.75	\$0.50
20	Finish carpentry	Molding 1x2	lin ft	0.2	\$14.00	\$1.80
21	Finish carpentry	Window wrap 1x4	lin ft	0.0006	\$14.00	\$0.75
22	Floors-carpet	WHINDS WISP IX4	lin ft	0.02	\$14.00	\$0.80
	Floors-vinul	Vinu1	sq yd			\$11.00
24	Foundation	Footings	sqft	0.0015		\$0.72
25	Foundation	Foundations and Walls	sqft	800.0	\$10.00	\$43.85
26	Garage doors	overhead	sqft	0.01	\$10.00	\$43.85
27	Grading and Fill	all areas	each	2.5	\$13.00	\$250.00
	Insulation	Batt insulation between joists & rafters	ou yd	0.0833	\$20.00	\$3.00
	Insulation	Date insulation perween joists & rafters	sqft	0.0008	\$8.00	\$0.80
		Batt insulation stapled between wall studs Tool Rental	sqft	0.001	\$8.00	\$0.90
		Site	tot			\$700.00
32	Plumbing fixtures	Install Bath tub and Shower	tot			\$50.00
33	Plumbing fixtures	Install Lavatory - ordinary grade	each	5	\$15.00	\$125.00
54	Plumbing fixtures	Ingtall Water aloned and	each	3.5	\$15.00	\$65.00
55	Plumbing rough & tru	Roughing in one story house complete	each	3.5	\$15.00	\$50.00
6	Plumbing Solar Water	(X) and precise	each	60	7.5.53	\$1,500.00
_	Dold Marel	Ino del hessias	each			\$1,200.00

continued

	Task	Description	Units	Labor per Unit	Labor per Hour	Matri Unit Cast
37	Plumbing Water htr	52 gal eleotric			nod1	autt C#21
38	Roofing	Asbestos-cement, reotangular (plain roof)	each	4.25	\$15.00	\$75.00
39	Rough Carpentru	Bridging, wood solid		2	\$9.00	\$24.50
	Rough Carpentry	Joists 2x10	set	0.12	\$15.00	\$78.00
	Rough Carpentry	Joists 2x6	bdft	0.0021	\$13.00	\$0.27
	Rough Carpentry	Joists 2x8	bdft	0.0023	\$13.00	\$0.27
	Rough Carpentru		bdft	0.0023	\$13.00	\$0.27
	Rough Carpentry	Plywood roof decking 1/2" flat roof	sqft	0.0013	\$13.00	
#	Rough Carpentry	Ply wood sheathing 3/8"	sqft	0.0017	\$13.00	\$0.40
42	Rough Carpentry	Ply wood subflooring 5/8"	sqft	0.0013		\$0.36
30	Rough Carpentry	Rafters 2x8 flat roof	sqft		\$13.00	\$0.48
	Rough Carpentry	Sills & Plates	bdft	0.0027	\$13.00	\$0.27
	Rough Carpentry	Chida Out & LCHAA		0.0022	\$13.00	\$0.40
49	Rough Carpentry	Chida O. C O LCHOO	bdft	0.0027	\$10.00	\$0.27
50		Inctall Abundance	bdft	0.0029	\$10.00	\$0.27
		The Carl Profit Hotel	each	2	\$12.00	\$80.00

Figure 7-5. A printout of the Faraday Bid Detail form

T	Task	Description	Area Desc	Est. Amnt	Units
-		Base	All Areas		lin ft
	OURIE (S	Overhead	All Areas		lin ft
		Vanitu	Baths		lin ft
		Slabs on Fill, sidewalks, driveways etc.	Basement Stairs		cu yd
			Sidewalks	1.5	cu yd
			Driveway	15	ou yd
			Kitchen/Garage	2	each
			All Areas		each
3 0	oors	Hang interior door (light weight)	All Areas		each
		Install frame, fit, hang and trim EXTERIOR	All Areas		each
0 0	oors	Install frame, fit hang and trim INTERIOR	All Areas		each
	ones	Install mortise lock set			each
2 1	Doors	Set Door Frame	All Areas	1,500	
3 10	Drywall	1/2" sheetrock on ceiling	Main Floor	2,500	
	Druwall	3/8" sheetrock on walls	Main Floor		lin ft
5 1	lactrical	#12 sheathed	All Areas		each
6	Flectrical	Meter and Main Panel			each
7 1	Cleaterian	Switches and Receptacles	All Areas	3,500	
6	Exterior Siding	Bevel Siding, 1x6 (+10% mitered corners)		3,500	lin ft
8		Handrails	Stairs		O hin ft
	Finish carpentry	Molding 1x2	All Areas		
V	Finish carpentry	Window wrap 1x4	Main Floor		) in ft
4	Floors-carpet		Main Floor	91	6 sq yd
4	Floors-vinyl	Vinu1	Kitchen		D sqft
3	Foundation	Footings	Main Living Room		0 sqft
4	Foundation	Foundations and Walls	Main Living Room		0 sqft
(2)	Pouridation	overhead	Garage		1 each
26	Garage doors	all areas	Backy and		O cu yd
27	Grading and Fill	Batt insulation between joists & rafters	Main Floor		Osqft
28	Insulation	Batt insulation stapled between wall studs	Main Floor		Osqft
29	Insulation	Tool Rental			1 tot
30	Overhead - Rentals				1 tot
31	Overhead - Utilities	Install Bath tub and Shower	All Areas		2 each
32	Plumbing fixtures	Install Bath tub and Snower Install Lavatory - ordinary grade	All Areas		3 each
33	Plumbing fixtures	Install Vater closet - ordinary grade	All Areas		2 each
34	Plumbing fixtures	Install water closet - ordinary grade	All Areas		1 each
35	Plumbing rough & tri	Roughing in one story house complete	Roof		1 each
36	Plumbing Solar Water	r 30 gal passive	All Areas		1 each
37	Plumbing Water htr	52 gal electric			20 per squ
38	Roofing	Asbestos-cement, rectangular (plain roof,	All Areas	-	2 set
39	Rough Carpentry	Bridging, wood solid		81	00 bdft
40	Rough Carpentry	Joists 2×10	Main Floor	5	2011-464

	Labor	Labor	Matri Unit Cost	Cost			
	per Unit	per Hour					
1	0.05	\$12.00	\$100.00	\$2,515.00			
2	0.11	\$12.00	\$78.00	\$1,586.40			
3	0.07	\$12.00	\$85.00	\$643.80			
4	2	\$18.00	\$43.85	\$1,237.68			
5	2	\$18.00	\$43.85	\$119.78			
6	2	\$18.00	\$43.85	\$1,197.75			
17	2			\$56.00			
8	1.6	\$14.00		\$179.20			
9	6	\$14.00	\$70.00	\$308.00			
10		\$14.00	\$55.00	\$750.00			
11		\$14.00	\$30.00	\$206.00			
12		\$14.00	\$10.00	\$192.00			
13		\$16.00	\$0.46	\$738.00			
14			\$0.39	\$1,015.00			
115			\$0.80	\$859.50			
116			\$300.00	\$400.00			
119				\$540.00			
18			\$0.50	\$1,869.44			
19				\$184.00			
				\$455.04			
20				\$432.00			
21		-	\$11.00	\$1,056.00			
27	0.001	5	\$0.72	\$72.00			
			\$43.85	\$439.30			
24				\$439.50			
25				\$282.50			
20				\$93.32			
2			\$0.80	\$1,209.60			
21				\$1,089.60			
25		70.00	\$700.00	\$700.00			
30		-	\$50.00	\$50.00			
3		5 \$15.0		\$400.00			
3		.5 \$15.0		\$352.50			
3		.5 \$15.0		\$205.00			
3		50	\$1,500.00				
3		50	\$1,200.00				
3	6	25 \$15.0					
3							
3							
3							
4	0.00				_	_	_

To run the summary report:

□ Choose Report... from the Organize menu.

Sort	A->Z	Not Sorte	Not Shown	
Heading Field	Task	Cost	Description	Ar
by Task	Task	Cost	Description	Are
Grand	-	Total		

File opens the Report window with the summary report you created and saved with the Bid Master datafile.

 $\hfill\Box$  Click the Preview button to see your report displayed on the screen.

Concrete Finishing \$2,	,745.20
Concrete Finishing \$2,	
Concrete Finishing \$2,	
	55\$.20
	691.20
D 41	753.00
	799.50
	869.44
PART I	071.04
	056.00
	\$72.00
	878 80
Garage doors \$2	282.50
	\$93.32

Notice how File combines each of the similar tasks into one group and displays a total for each group. For example, all six door tasks are combined in the Doors category and a total cost for all doors is given.

Now save the information in this report so you can bring it into your Bid Worksheet, where you will add things like contingencies and tax, and then print the actual bid.

To save the report information:

- □ Click the Done button to end previewing the report.
- □ Choose Save Report As... from the File menu.

- □ Type Faraday Bid Info (the name of your report).
- □ Click the button in front of Text Output and click Save.

The Text Output button tells File to save the actual report information rather than just the report form.

That's all you need to do with the bid master for your job. You've used it to get the information you need in the report by tasks, which you've saved as a text-only file named Faraday Bid Info. The next step is to leave the Faraday Bid Master datafile and load the Faraday Bid Info summary report information into the Bid Worksheet datafile. For our example, we'll first make a copy of the Bid Worksheet and name it Faraday Bid. That way, the Bid Worksheet will stay intact and you can use it for all of your future bids.

- ☐ Choose Quit from the File menu to leave the Faraday Bid Master datafile and return to the Mac desktop.
- □ Select Bid Worksheet by clicking on the icon and choose Duplicate from the File menu.

The Mac creates a copy of the Bid Worksheet and you see a new icon on the desktop called Copy of Bid Worksheet.

- □ Rename the Copy of Bid Worksheet by typing *Faraday Bid* and pressing the Return key.
- □ Double-click on the Faraday Bid icon to load it into File.

Now load the tasks and amounts from the summary report by task into the Faraday Bid.

□ Choose Open Datafile... from the File menu and double-click on Faraday Bid Info.

File Edit Form Organize

2 -	Task Task	Base Cost #ERROR!	Allowance	Cntgcy%	Cntgcy
2 -	Task	#EDDUBI			0909
					- 88
		*ERROR!			
3 (	Cabinets	\$4,745.20			
4	Concrete Finish	\$2,555.20			
	Doors	\$1,691.20			
	Drywall	\$1,753.00			
	Electrical	\$1,799.50			
8	Exterior Siding	\$1,869.44			
	Finish carpentr	\$1,071.04			
	Floors-carpet	\$1,056.00			
	Floors-vinyl	\$72.00			
	Foundation	\$878.80			
	Garage doors	\$282.50			
14	Grading and Fill	\$93.32			
15	insulation	\$2,299.20			
16	Overhead - Rent	\$700.00			
17	Overhead - IIIII	\$50.00			

The tasks and costs from the Faraday Bid Master summary are loaded into your Bid Worksheet. You see a few records at the top of the datafile with ERROR#!. Don't worry about these records: They're headings from the Faraday Bid Info report that don't belong in this datafile. Simply select them by dragging the mouse pointer across their record numbers, holding down the Option and Command keys, and pressing the Backspace key to delete them.

If you're using an early version of File (1.0 or 1.01) you may find that if the text in a field (in this case, the Task field) is longer than the field (all the text can't be viewed in it), File may omit the tab character (the field separator) when it saves the report on disk as a text-only file. This results in some of the totals being copied into the same field as the task rather than into the Base Cost field.

		Far	aday Bid		
0	Task	Base Cost	Allowance	Cntgcy%	T Cata
8	Floors-carpet	\$1,056.00		опедедж	Cntgcy
9	Floors-vinyl	\$72.00			-
10	Foundation	\$878.80			
11	Garage doors	\$282.50			
	Grading and Fill	\$93.32			
13	Insulation	\$2,299.20			
14	Overhead - Rent	\$700.00			
15	Overhead - Util	\$50.00			
16	Plumbing fixtur	\$957.50			
17	Plumbing rough	\$1,500.00			
8	Plumbing Solar	V1,000.00			
9	Plumbing Water	\$138.75			
0	Roofing	\$850.00			
1	Rough Carpentry	\$4,045.19			
2	Windows-alumi	\$416.00			
W	- Training	J-410.00			

In our example, look at record #18. There is nothing in the Base Cost field for that record. If you widen the field, you'll see that the base cost total for that record was put into the Task field.

**♠** File Edit Form Organize

8	Task	** Base Cost	Allowance	
9	Floors-carpet	\$1,056.00	- dice	_
_	Floors-vinyl	\$72.00		
	Foundation	\$878.80		
11	Garage doors	\$282.50		
12	Grading and Fill	\$93.32		
13	Insulation	\$2,299.20		
14	Overhead - Rentals	\$700.00		
15	Overhead - Utilities	\$50.00		
16	Plumbing fixtures			
17	Plumbing rough & trim	\$957.50		
8	Plumbing Solar Water htr\$1,200.00	\$1,500.00		
9	Plumbing Water htr			
0	Roofing	\$138.75		
1	Rough Carpentry	\$850.00		
2	Windows-aluminum	\$4,045.19		
ew	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	\$416.00		
> 11				

This occurs because when you run the summary report and save it as a text-only file on disk, the Task field in the report window is not wide enough to accommodate all the text. So you need to go back to the Bid Master datafile, open the report window, make the Task field wider, choose Save Report As... from the File menu, click the Text Output button, type a report name, click the Save button, and then bring the report into the Faraday Bid datafile again.

Your Bid Worksheet should now look like this:

			aday Bid 🔙		L 0 - 4
	Task		Allowance	Cntgcy%	Cntgcyk
8	Floors-carpet	\$1,056.00			
	Floors-vinyl	\$72.00			
	Foundation	\$878.80			
	Garage doors	\$282.50			-
12	Grading and Fill	\$93.32			1
	Insulation	\$2,299.20			
14	Overhead - Rent	\$700.00			
15	Overhead - Util	\$50.00			
16	Plumbing fixtur	\$957.50			
17	Plumbing rough	\$1,500.00			
18	Plumbing Solar	\$1,200.00			
19		\$138.75			-
20		\$850.00			
21	Rough Carpentry	\$4,045.19			-
22		\$416.00			
New	/				

First, widen the Task field to accommodate the text it contains. Since you're using a List Helper form, you can do this in the datafile window.

- $\hfill\square$  Place the mouse pointer on the right side of the Task field heading.
- □ When the mouse pointer looks like this:

	L (4)	Base Cost	Allowance	Cntgcy%	Cntgcy∂	
		\$4,745.20	Hillowa			
1	Cabinets					
2	Concrete Finish	\$2,555.20				
3	Doors	\$1,691.20				
4	Drywall	\$1,753.00				
	Electrical	\$1,799.50				
	Exterior Siding	\$1,869.44				
	Finish carpentr	\$1,071.04				
	Floors-carpet	\$1,056.00			1	
	Floors-vinyl	\$72.00				Poir
	Foundation	\$878.80				
	Garage doors	\$282.50				
12	Grading and Fill	\$93.32				
	Insulation	\$2,299.20				
14	Overhead - Rent	\$700.00				
15	Overhead - Util	\$50.00				
16	Plumbing fixtur	\$957.50				
17	Plumbing rough	\$1,500.00			C) P	

hold down the mouse button and drag to the right until the Task field is twice its current length. Release the mouse button.

File Edit Form Organiz	É	File	Edit	Form	Organia	_
------------------------	---	------	------	------	---------	---

1	Task	Faraday Bid Base Cost	Allowance	Cntg
2	Cabinets	\$4,745.20	undilice	Litty
	Concrete Finishing	\$2,555.20		
3	Doors	\$1,691.20		
4	Drywall	\$1,753.00		
5	Electrical	\$1,799.50		
6	Exterior Siding	\$1,869.44		
7	Finish carpentry	\$1,071.04		
8	Floors-carpet	\$1,056.00		
9	Floors-vinul	\$72.00		V
10	Foundation			
11	Garage doors	\$878.80		
2	Grading and Fill	\$282.50		
3	Insulation	\$93.32		
4	Overhead - Rentals	\$2,299.20		
5	Overhead - Utilities	. \$700.00		
6	Plumbing fixtures	\$50.00		
7	Plumbing rough &	\$957.50		
21	Plumbing rough & trim	\$1,500,00		

Now all you have left to do is complete the allowance, contingency, and tax% fields and your bid will be complete (and hopefully, acceptable to the customer). I've added an allowance field because some contractors prefer to give the owner an allowance (an amount that they can spend for particular items), rather than including a base cost for items such as floor coverings and appliances. With an allowance, if an owner wants a particularly expensive carpet, for example, one that exceeds the allowance, the owner is charged for the amount greater than the allowance. Some contractors combine base costs and allowances by using the base-cost field for the cost of standard-grade items, then adding an allowance amount, a figure that can be used to upgrade from the standard grade. They feel this gives them a bit more flexibility. If their actual costs are exceeding their estimates, they can eliminate allowances, use standard grades, and come closer to their original totals.

Next, you need to add contingency percentage figures where you need them. You might want a contingency percentage for the foundation, for example, if you aren't sure if you'll be building on clay in rainy or dry weather. Remember, since the field is formatted for Percent display, you'll want to enter a figure of, for example, 15 percent as .15, not 15.

Finally, you need to add Tax%. I've made Tax% a field that you enter manually rather than including a tax percent (such as 7.18 percent) in the tax formula. Some items will have the standard tax rate in your area, others may not be taxed, and still others may have a different tax rate. If you enter the tax percent for each item, you can accommodate these differences. If you want the same tax percentage applied to all the tasks in your master Bid Worksheet, delete the Tax% and Tax fields, create a new computed field called Tax, and change the formula for your Tax field to Subtotal \* .0718 (or whatever your tax rate is).

After you've entered this information, your Faraday Bid should look something like the printed bid worksheet shown in Figure 7-6.

Figure 7-6. A printout of the Faraday Bid datafile

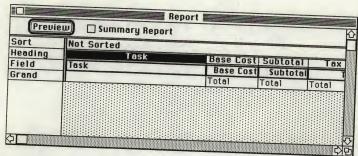
_	Task	Base Cost	Allowance	Cntgcy%
_		\$4,745.20	\$3,175.00	
	Cabinets	\$2,555.20		
	Concrete Finishing	\$1,691.20		
	Doors	\$1,753.00		
4	Drywall	\$1,799.50	\$850.00	5.00%
	Electrical	\$1,869.44	-	
6	Exterior Siding	\$1,071.04		5.00%
7	Finish carpentry		\$500.00	
	Floors-carpet	\$1,056.00	\$150.00	
9	Floors-vinyl	\$72.00	\$130.00	5.00%
10	Foundation	\$878.80		
11	Garage doors	\$282.50		
12		\$93.32		
13		\$2,299.20		
14	1 Dendele	\$700.00		
15		\$50.00	1=12.00	10.008
	Plumbing fixtures	\$957.50	\$700.00	15.00%
		\$1,500.00		
17		\$1,200.00		15.009
18	Plumbing Sold Water htr	\$138.75		
19		\$850.00		
20	Roofing	\$4,045.19		
21	Rough Carpentry	\$416.00		
22	Windows-aluminum	\$410.00		

continued

		O-Mandal	Taxx	Tax	Bid Total
$\neg$	Cntgcy Amt	Subtotal	IUAN	\$0.00	\$7,920.20
1	\$0.00	\$7,920.20	0.0718	\$183.46	\$2,738.66
2	\$0.00	\$2,555.20	0.0718	\$121.43	\$1,812.63
3	\$0.00	\$1,691.20	0.0718	\$125.87	\$1,878.87
4	\$0.00	\$1,753.00	0.0710	\$0.00	\$2,739.48
5	\$89.98	\$2,739.48	2 2 2 4 2 4	\$134.23	\$2,003.67
6	\$0.00	\$1,869.44	0.0718	\$80.75	\$1,205.34
7	\$53.55	\$1,124.59	0.0718	\$111.72	\$1,667.72
B	\$0.00	\$1,556.00	0.0718	\$15.94	\$237.94
9	\$0.00	\$222.00	0.0718	\$66.25	\$988.99
10	\$43.94	\$922.74	0.0718	\$20.28	\$302.78
11	\$0.00	\$282.50	0.0718	\$0.00	\$93.32
12	\$0.00	\$93.32		\$165.08	\$2,464.26
13		\$2,299.20	0.0718	\$0.00	\$700.00
14		\$700.00		\$0.00	\$50.0
15		\$50.00		\$125.88	\$1,879.1
16	A	\$1,753.25	0.0718	\$123.86	\$1,848.8
17		\$1,725.00	0.0718	\$99.08	\$1,479.0
18		\$1,380.00	0.0718	\$9.96	\$148.7
19		\$138.75	0.0718	\$61.03	
20		\$850.00	0.0718		
2	11.11	\$4,045.19	0.0718	\$290.44	
2	10.00		0.0718	\$29.87	\$443.0

Now you've entered all the information you need for this bid. The only thing left is to print it using the report form you created and saved earlier.

☐ Choose Report... from the Organize menu.



File opens the Report window and displays the report you saved with the Bid

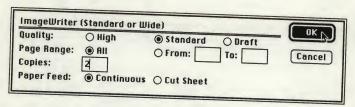
Check to make sure the box in front of Summary is not checked. You want the bid to be an entire report, not just a summary report that shows only totals.

□ Click the Preview button to preview the report.

You will see the finished bid displayed. Check it to make sure it is what you want. You can save printing time and paper by first previewing the report and making any changes before you print the report on your printer.

To print a copy for yourself and one for the Faradays:

- □ Choose Print Report... from the File menu.
- $\hfill\square$  Double-click in the Copies box, change the 1 to a 2, and click OK.



Your reports should begin printing and your finished bid should look something like the sample Faraday Bid shown in Figure 7-7.

Figure 7-7. A printed bid for the Faraday job

Task	Base Cost	Subtotal		31d Total
	\$4,745.20	\$7,920.20	\$0.00	\$7,920.20
Cabinets	\$2,555.20	\$2,555.20	\$183.46	\$2,738.66
Concrete Finishing	\$1,691.20	\$1,691.20	\$121.43	\$1,812.63
Doors	\$1,753.00	\$1,753.00	\$125.87	\$1,878.87
Drywall	\$1,799.50	\$2,739.48	\$0.00	\$2,739.48
Electrical	\$1,869.44	\$1,869.44	\$134.23	\$2,003.67
Exterior Siding	\$1,071.04	\$1,124.59	\$80.75	\$1,205.34
Finish carpentry	\$1,056.00	\$1,556.00	\$111.72	\$1,667.72
Floors-carpet	\$72.00	\$222.00	\$15.94	\$237.94
Floors-vinyl	\$878.80	\$922.74	\$66.25	\$988.99
Foundation	\$282.50	\$282.50	\$20.28	\$302.78
Garage doors	\$93.32	\$93.32	\$0.00	\$93.32
Grading and Fill	\$2,299.20	\$2,299.20	\$165.08	\$2,464.28
insulation	\$700.00		\$0.00	\$700.00
Overhead - Rentals	\$50.00		\$0.00	\$50.00
Overhead - Utilities	\$957.50		\$125.88	\$1,879.13
Plumbing fixtures	\$1,500.00		\$123.86	\$1,848.86
Plumbing rough & trim			\$99.08	\$1,479.08
Plumbing Solar Water htr	\$1,200.00		\$9.96	
Plumbing Water htr	\$850.00		\$61.03	\$911.03
Roofing	\$4,045.19		\$290.44	
Rough Corpentry	\$4,045.15		\$29.87	
Windows-aluminum				
	Total: \$30,023.84	4 \$36,087.06	\$1,765.14	\$37,852.1



# Cost-Tracking

Now that the bidding system set up in Chapter 7 is working, you need a way to track job costs and compare your actual costs to your bids as the work progresses. That way you can make sure that you're staying within your original estimates.

To track job costs, you'll start by creating a datafile called Outstanding Invoices, which will contain the outstanding invoices for all of your jobs. Part of the Better Builders' Outstanding Invoices datafile is shown in Figure 8-1.

You'll also create an invoice history datafile to store each job's invoices. Once each week, you'll enter information from all the invoices you've received during the week for all of your jobs in the Outstanding Invoices datafile. Then, you can sort the week's invoices by job, copy that information into each job's invoice history datafile, then generate a summary report for each job, which will provide the information needed to compare actual costs to the original bid.

When you're awarded the bid for a new job and work has started, you can rename that job's bid worksheet datafile (in our example, the Faraday Bid datafile) something like Faraday Job Cost Card, add a few fields that will contain cost information from the summary report generated from the job's invoice history datafile, and use this new datafile to compare actual costs to the original bid. (A sample Job Cost Card is shown in Figure 8-2.) With all this information in one place, it's easier to analyze a job's cost and see how accurate your bidding is.

I suggest that you record invoices weekly. But if your business is small, you may need to record invoices and complete job cost cards only monthly.

Figure 8-1. A sample Outstanding Invoices datafile printout

		Cupaling	Invoice *	Date	Task	Qnty	
$\neg$	Job	Juppine			Grading and Fill	6.5	
	Miller	Big D Trucking	1774	10/2/85	Rough Carpentry		tot
	Miller	KOU 2 FOLLIDAL	23204	10/13/85	Grading and Fill		hr
	Miller		6281	10/28/85	Foundation	0.5	
	Faraday	Top hat band of district	8087		Foundation	13	
	Faradau	Dan Braden	11348	10/24/85	Foundation		65
	Faraday	Dan bragen	11322	10/14/85	Grading and Fill		hr
-	Faradau		6286	10/25/85	Grading and Fill		yd
A	Miller	Top hat ballo or of the	7983	10/23/85	Foundation	35.5	
	Miller	Dan Braden	11322	10/29/85	Foundation		lin ft
	Faradau	Dan Braden	11348	10/24/85	Foundation		69
ų.	Faraday	Dan Braden	11322	10/29/85	Foundation		69
ㅗ	Faraday	Dan Braden	11348	10/28/85	Foundation	217	
	Faradau	Dan Braden	11348		Rough Carpentry	2	69
	Miller	Pon's Lumber	23204	10/2/85	Grading and Fill	1	hr
	Faraday	Grader Seattle Buildozing	928	10/28/85	Foundation	10.5	Slud
		Top Hat Sand & Gravel	7983	10/25/85	Foundation	10.5	5 ud
	Miller	Top Hat Sand & Gravel	6711	10/19/85	Plumbing Solar Water htr		2 00
	Faraday	Winter Sun	3302	10/23/85	Plumbing Solar Water htr		JOB
Щ	Faraday	Winter Sun	3302	10/23/85	Overhead - Rentals	_	1 day
	Faraday	Western Crane	1911	10/2/85		2	5 hr
-		Grader Seattle Bulldozin	617	10/14/85	Grading and Fill		5 hr
21	Miller	S& A Backhoe	6281	10/13/85	Grading and Fill		5 ou
	Miller	Top Hat Sand & Gravel	6711	10/19/85	Foundation		6 lb
23	Faraday	Top Hat Sand & Gravel	7983	10/25/85	Foundation		1 00
24	Miller	Winter Sun	3302	10/23/85		+	11
25	Faraday	S& A Backhoe	6286	10/14/85	Grading and Fill	-	1 tot
26	Faraday		23209	10/2/85	Rough Carpentry		1 108
	Faraday	Ron's Lumber	3302	10/23/85	Plumbing Solar Water htm	1 00	O lin fi
	Faraday	Winter Sun	11348	10/28/85	Foundation	1,94	5 gal
29	Faraday	Dan Braden Western Crane	1916	10/2/85	Overhead - Rentals		oldai

continued

				Discount	Discount	Amt	Cost	Tax
-	Description	Unit Price S	Subtotal	DISCOUNT	Discount	\$0.00	\$331.63	\$25.87
-	0000	\$51.02	\$331.63			\$2.20	\$108.00	\$8.42
1	Dumptruok rental	\$110.20	\$110.20	2.00%		\$0.00	\$51.00	\$3.98
2	2x6 380' random length	\$51.00	\$51.00			\$0.50	\$24.50	\$1.91
3	Dumptruck - hauling Deliverd concrete - standby til	\$50.00	\$25.00	2.00%		\$0.00	\$195.00	\$15.21
4	Delivera concrete - standay to	\$15.00	\$195.00			\$0.00	\$45.00	\$3.51
5_	concrete step down	\$15.00	\$45.00			\$0.00	\$252.00	\$19.66
6	corners in foundation Trackhoe - foundation excavat		\$252.00			\$2.99	\$146.51	\$11.43
_		\$14.95	\$149.50	2.00%		\$0.00	\$1,597.50	\$124.61
8_	Crushed Gravel	\$45.00	\$1,597.50		-	\$0.00	\$86.52	\$6.7
9	Forming labor	\$0.42	\$86.52		-	\$0.00	\$20.10	\$1.5
10	2x4 cedar sills	\$0.30	\$20.10		-	\$0.00	\$175.00	\$13.6
ப	anchor bolts	\$25.00	\$175.00		-	\$0.00	\$60.76	\$4.7
	dirt steps	\$0.28	\$60.76		-	\$0.07	\$3.43	\$0.2
	rapid ties	\$1.75	\$3.50		5	\$0.00	\$200.00	\$15.6
	4x6 blocks	\$50.00	\$200.00		-	\$9.00	\$440.93	\$34.3
15	Backfill		\$449.93	2.009		\$0.53	\$25.73	\$2.0
16	Delivered Concrete - 5 sack r		\$26.25		8	\$0.00	\$2,790.00	\$216.8
17	Delivered concrete - front dis	\$1.390.00	\$2,780.00			\$0.00	\$220.00	\$17.1
18	Entech SunFlame water heater	\$220.00	\$220.00			\$0.00	\$135.00	\$10.5
19	Setting and Delivery		\$135.00			\$0.00	\$125.00	\$9.7
20	Boom truck for placement of I	\$50.00	\$125.00			\$0.00	\$378.00	\$29.4
21	Grade inside Foundation		\$378.00	0			\$411.60	\$32.
22	Trackhoe - foundation excava		\$420.00	2.00		\$8.40	\$15.48	\$1.3
23	Delivered Conorete - 2500ps		\$15.7	9 2.00	98	\$0.32	\$30.00	\$2.
24	Delivered concrete - calcium	\$30.00				\$0.00	\$160.00	\$12.
25	Bypass Valve			0		\$0.00	\$813.01	\$63.
26	Move-in & Move-out of traci	NI .			%	\$16.59	\$227.25	\$17
27	2x12's 18-20's, 29-18's, 1	\$227.25				\$0.00	\$194.00	\$15.
26	Tax 7.5% (Tacoma)	\$0.10				\$0.00	\$5.75	\$0
20	Irebar placement					\$0.00	\$5.75	40.
30	A he send	\$1.15	\$5.7	5				

continued

-	Total Cos	t	De	iti	9	Pai
1	\$357.50	0	10	1	1/8	34
13	\$116.42		10/	E	/8	34
13	\$54.98	4	10/	-	/8	_
=	\$26.41	Щ	10/	-	/8	_
6	\$210.21	4	10/	-	/8	_
7	\$271.66	4	10/	-	<u>/8</u>	-
8	\$157.94	+	10/	_	<del>/8</del>	_
9	\$1,722.11	+	10/	-	/8 /8	
10	\$93.27	+	10/		/8 /8	
11	\$21.67	4	10/		8	
12	\$188.65	t			/8	
13	\$65.50	t	_	51/		
14	\$3.70	İ	0/1		84	
15	\$215.60	İ	0/3		84	
16	\$475.32	1	0/3		84	
17	\$27.73	1	0/3	17	84	
18	\$2,996.84	1	0/3	17	84	
19	\$237.16	1	0/3	1/	84	
20	\$145.53	0	0/1	3/	84	
21	\$134.75	o	0/1	5/	34	
22	\$407.48	П	0/1	3/8	34	
23	\$443.70	11	0/3	1/8	34	
28 I	\$16.68	10	0/3	1/8		
22	\$32.34	10	0/31	1/8		
<del>49</del>	\$172.48	10	/15	/8		
20	\$876.42	10	1/15	/8		
20	\$244.98	10		/8		
30	\$6.20			/8		
	\$6.20	U	/15	/8	4	

Figure 8-2. Part of a sample Job Cost Card datafile

1	Task	Bid Total	Actual	Difference	
2	Rough Carpentry	\$4,335.63	\$4,375.00		% of Bid
3	Windows-aluminum	\$445.87	\$445.87	(\$39.37)	100.91
4	Floors-vinyl	\$237.94	\$245.79	\$0.00	100.00
5	Grading and Fill	\$93.32	\$200.00	(\$7.85)	103.30
_	insulation	\$2,464.28	\$2,438.90	(\$106.68)	214.32
6	Plumbing Water htr	\$148.71	\$138.90	\$25.38	98.97
	Overhead - Rentals	\$700.00		\$9.81	93.405
8	Floors-carpet	\$1,667.72	\$700.00	\$0.00	100.009
9	Exterior Siding	\$2,003.67	\$1,590.30	\$77.42	95.368
10	Foundation		\$2,149.00	(\$145.33)	107.258
11	Roofing	\$988.99	\$863.35	\$125.64	87.30%
12	Doors	\$911.03	\$1,062.50	(\$151.47)	116.63%
13	Electrical	\$1,812.63	\$1,800.00	\$12.63	99.30%
14	Concrete Finishing	\$2,739.48	\$2,725.80	\$13.68	99.50%
15	Plumbing rough & trim	\$2,738.66	\$2,720.20	\$18.46	99.33%
16	Finish carpentry	\$1,848.86	\$1,796.43	\$52.43	
17	Cabinets	\$1,205.34	\$1,326.55	(\$121.21)	97.16%
	Garage doors	\$7,920.20	\$8,125.60	(\$205.40)	110.06%
	Plumbing dist	\$302.78	\$310.70	(\$7.92)	102.59%
20	Plumbing fixtures	\$1,879.13	\$1,902.88		102.61%
21 [	Plumbing Solar Water htr	\$1,479.08	\$3,257.25	(\$23.75)	101.26%
	Drywall	\$1,878.87	\$1,824.65	(\$1,778.17)	220.22%
2	Overhead - Utilities	\$50.00		\$54.22	97.11%
		1 20.00	\$63.13	(\$13.13)	126.26%

# Making the Outstanding Invoice Form

Now you need to create a form for displaying Outstanding Invoice information. You'll enter invoice information from all your jobs in this datafile once a week.

☐ Choose New Datafile... from the File menu.

You may see a dialog box asking if you want to save the current form with the Faraday Bid datafile. If so, click the YES button.

- □ Click the Eject button.
- ☐ Insert a blank disk, initialize it if necessary, and name it Job Costs.
- ☐ Type Outstanding Invoices as the name of your new datafile, then click the New button.

Outstanding Invoices will contain these fields:

• Job

This field contains the owner's name or some other means of identifying the job.

Supplier

In this field, you enter the name of the supplier submitting the invoice.

• Invoice #

This will be a text field, because some invoice numbers contain letters.

• Date

The date you enter in this field is the date the invoice was received.

Task

In this field, enter the task for which the item on the invoice was used. The task must be typed in exactly as it was on your Bid Master datafile.

• Qnty

Qnty contains the quantity of the item on the invoice.

• Unit

The Unit field contains the unit of measurement used in that record in the Qnty field (for example, per hour, per yard, or each).

- Description
- Unit Price
- Subtotal

The Subtotal field is a computed number field containing a formula that multiplies Qnty by Unit Price.

### Discount

This field contains the percentage discount most suppliers grant you on your subtotal if you pay within 10 days. If there is no discount, enter 0 in this field.

### • Discount Amt

This field computes the actual dollar amount of the discount from the supplier by multiplying the Subtotal and Discount fields.

### Cost

The Cost field computes the amount you pay for the item with a formula that subtracts Discount Amt from Subtotal.

### • Tax

In this field, enter the sales tax or other applicable tax amount.

### • Total Cost

This computed number field contains a formula that adds Cost and Tax.

### • Date Paid

Enter the date you paid the supplier in this field.

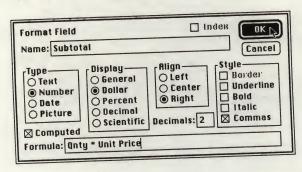
## □ Add these fields in the form window:

Field Name	Information Type
Job	Text
Supplier	Text
Invoice #	Text
Date	Date
Task	Text
Qnty	Number
Unit	Text
Description	Text
Unit Price	Number
Subtotal	Number
Discount	Number
Discount Amt	Number
Cost	Number
Tax	Number
Total Cost	Number
Date Paid	Date

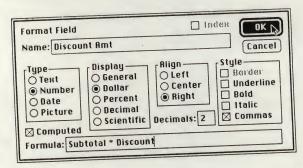
Add formulas to the Subtotal, Discount Amt, Cost, and Total Cost fields:

<sup>□</sup> Scroll the form window to the left until the Subtotal field is visible.

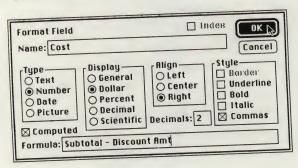
- Double-click on the Subtotal field. When the Format Field dialog box appears, click Dollar in the Display box, click the Computed box, then click an insertion point in the Formula typing field.
- □ Type Qnty \* Unit Price and click the OK button.



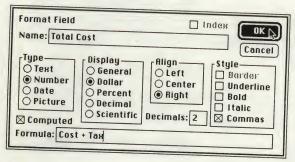
- Double-click on the Discount Amt field. Click on the Dollar button in the Display box, click the Computed box, then click an insertion point in the Formula typing field.
- $\hfill ext{Type } ext{Subtotal } * ext{Discount} ext{ and click the OK button}.$



- □ Double-click in the Cost field.
- Click the Dollar button in the Display box, click the Computed box, and click an insertion point in the Formula typing field.
- □ Type Subtotal − Discount Amt and click the OK button.



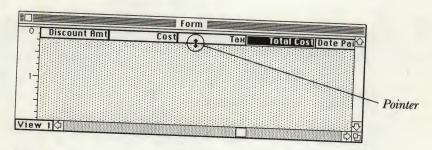
- □ Double-click on the Total Cost field.
- Click the Dollar button in the Display box, click the Computed box, and click an insertion point in the Formula typing field.
- $\Box$  Type Cost + Tax and click the OK button.



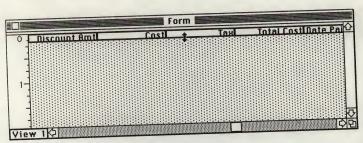
We've left Tax a plain number field rather than make it a computed field so that you can enter the exact amount for tax from your paper invoice instead of trying to determine the tax rate for each item and using a formula. That way, if certain items are not taxed or are taxed at different rates, your tax figure on the screen and the one on your paper invoice will match. If you prefer, you can make Tax a computed field and enter the formula Cost \*.0781 (or whatever your tax rate is for all items).

Now you've completed the form except for formatting changes such as sizing the fields. Since fields like Qnty and Unit will contain a small amount of information, you can make those fields smaller. You can also make all the records narrower. To make the records narrower:

- $\square$  Move the mouse pointer to the top of the hide area.
- □ When the pointer looks like this:



drag the bottom line up about a sixteenth of an inch and release the mouse button.



Now you should be able to see 22 records rather than 17 records at once in the datafile window.

Now format the Unit Price and Tax fields for Dollar display.

- □ Click on the Tax field to select it.
- □ Hold the Shift key down, then scroll to the left and click on the Unit Price field.
- □ Choose Format Number Field... from the Form menu.
- □ In the dialog box, click on Dollar in the Display list box then click OK.

Next, change the display of the two date fields from medium-length display (the default) to short display.

- □ Scroll left and click on the Date field.
- □ Hold down the Shift key, then scroll to the right and click on the Date Paid field.
- □ Choose Format Date Field... from the Form menu.
- □ Click the Short button in the Display box, then click the OK button.

Format the Discount field for Percent display.

- □ Scroll to the left and double-click on the Discount field.
- $\hfill\Box$  In the dialog box, click the Percent button in the Display box, then click the OK button.

You've narrowed the fields to display more records on the screen. To squeeze more text into each field, change the font size of all the fields to 9-point.

- □ Choose Select All from the Edit menu.
- $\hfill\Box$  Choose Set Font... from the Form menu, click on the 9 to select 9-point font size, then click the OK button.

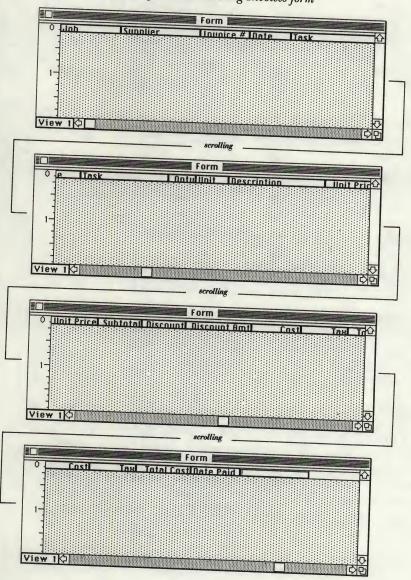
Now all fields in the datafile window will display information in 9-point font.

The last step is to size the fields. Since many of the fields are wider than the text they'll contain, and since there are so many fields, it's a good idea to reduce the size of as many fields as possible so that more fields can be viewed at once on

the screen and so that all of the fields will fit on one page when you print the records out on your printer. You may want to make some fields (such as Supplier, Task, and Description) wider so that all the text they contain can be seen.

Your finished outstanding invoice form should look something like the form shown in Figure 8-3.

Figure 8-3. The completed Outstanding Invoices form



- □ Save this form by choosing the Save Form As... command from the File menu.
- □ Type *Invoice Form* as the name of the form and then click the Save button.

You will use Invoice Form later when you make invoice history datafiles for each job.

So that you don't have to create a new Outstanding Invoices datafile every time you fill a disk with invoice information, make a copy of Outstanding Invoices now, rename the copy (we'll use the name Invoices - October 1986 for our example), and move this copy to a blank disk. When that disk is full, just make another copy of the Outstanding Invoices datafile, rename it to reflect the date involved, and move it to another blank disk. To make a copy of the Outstanding Invoices datafile:

- □ Choose Quit from the File menu.
- ☐ On the Macintosh desktop, click on the Outstanding Invoices datafile icon to select it.
- □ Choose Duplicate from the File menu.

After a short time, another icon called Copy of Outstanding Invoices will appear on the desktop.

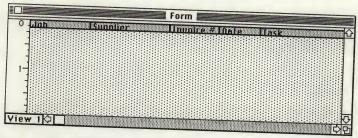
- □ Since the new icon is already selected, just type *Invoices October* 1986 and press Return to rename it.
- □ Choose Eject from the File menu.
- □ Insert a blank disk, initialize it if necessary, and name it Invoices 1.
- □ Click on the dimmed Invoices October 1986 icon, hold down the Shift key, then click on the Invoice Form icon.
- □ Drag the dimmed, selected icons onto the Invoices 1 disk icon and release the mouse button. Follow the disk-swapping instructions displayed on the screen.

### The Historical Job Datafile

In addition to a large invoice datafile that has monthly information for all jobs, you need to create an invoice history datafile for each job. The invoice history datafile will keep invoice information for only one job from the starting date to the current date. That way, you'll have all the invoice information for one job in one place, and at the end of the job you can go back over the information and compare the actual costs to your original bid and you can see if you need to improve on your bidding.

To create a new datafile to store a history of invoices for the Faraday job:

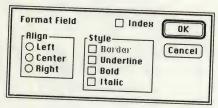
- $\hfill\Box$  Double-click on the Microsoft File icon to begin File.
- □ Type *Faraday Invoice History* as the name of your new datafile. Click the Drive button if necessary to save the file on your Invoices 1 data disk, then click the New button.
- Choose Open Form... from the File menu and, when the dialog box appears, double-click on Invoice Form.



The fields you see in the form window are the fields from the Invoice Form. But they are dimmed, because none of the fields in the form window have formatting yet. You want to tell File to use the formatting from the Invoice Form. To do this:

- □ Choose Select All from the Edit menu.
- □ Choose Format Field... from the Form menu.

You'll see this dialog box:



If you wanted to change the alignment or style of all the fields you could do so now, but the fields are already formatted the way you want them.

□ Click the OK button.

All the fields in the form window are now added to the Faraday Invoice History datafile.

Each invoice history file you create will use the same form (Invoice Form) as the Outstanding Invoices datafile, so load that form just as you did with Faraday Invoice History. That way you won't have to make a new one.

You're almost ready to start entering invoice information. But first you need to open the Invoices - October 1986 datafile, since that's where you'll enter the information for the current month.

- □ Click in the datafile window to make it active.
- □ Choose Open Datafile... from the File menu.
- □ When the dialog box appears asking if you want to save the current form with the Faraday Invoice History datafile, click the Yes button.
- □ Double-click on Invoices October 1986 to open it.

### **Adding Invoice Information**

Next, you need to take your stack of paper invoices and enter them one at a time in the Invoices - October 1986 datafile.

□ Enter the invoice information shown in Figure 8-1 (or information from your own invoices).

After this first time entering invoice information, as mentioned earlier in this chapter, you can enter invoice information once a week or so, depending on your level of invoice activity.

You can enter invoice information using whatever level of detail you're comfortable with. For example, in a lumber order you may wish to detail  $2 \times 4$ 's and  $2 \times 6$ 's separately, but you may want to group all the nails and bolts together as hardware. You're the best judge as to how much detail is useful. Be sure to separate the invoice information for each item you enter by job so you can track costs back to the correct job.

## **Separating Invoices by Job**

In our example, we'll use our Invoices - October 1986 datafile to store a month's worth of invoices. Each week, after you've entered each item from the week's invoices, sort them by job, copy them to the invoice history file for that job, run a summary report from the invoice history file for each job, and copy the totals from the summary report into the job cost cards for each job.

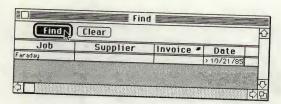
To find invoices for each job:

- □ Choose Find... from the Organize menu.
- □ Click in the Job field, type Faraday (or the name of one of your current jobs).

This tells File to find all records containing invoice information for the job you've specified. But you don't want to transfer ALL records for that job to that job's invoice-history datafile—you only want to transfer those records containing the most recent invoice information. You need to have File also find those records containing dates later than the last date that you entered invoice information for that job. You do that by putting the special search character > before the date in

the Date field. This tells File to find those Faraday records in which the specified field contains values greater than what you type after the > (in this case, the date). To tell File to find the most recent records:

- $\Box$  Click in the Date field and type > 10/21/85 (or the date you last entered invoice information for that job).
- □ Click the Find button.



Each week after you find the records containing invoices for that job in the Invoices - October 1986 datafile, you'll copy these records into the Clipboard, then open your invoice history datafile for the specified job and paste in that week's invoices.

To copy the Faraday invoices for the week of October 28:

- □ Click on any record number.
- □ Choose Select All from the Edit menu.

	Job	Supplier	- October 1		
1	FARADAY	Top Hat Sand & Gravel	Invoice *		Task
2	FARADAY	Dan Braden	8087	10/28/85	Foundation
3	FARADAY	Dan Braden	11348	10/28/85	Foundation
4	FARADAY		11322	10/24/85	Foundation
5	FARADAY	Top Hat Sand & Gravel Dan Braden	7983	10/25/85	Grading and Fill
6	FARADAY		11322	10/24/85	Foundation
7	FARADAY	Dan Braden Dan Braden	11348	10/28/85	Foundation
Ŕ	FARADAY		11322	10/24/85	Foundation
ă	FARADAY	Dan Braden	11348	10/28/85	Foundation
in	FARADAY	Dan Braden	11348	10/28/85	Foundation
ř	FARADAY	Grader Seattle Bulldozing		10/28/85	Grading and Fill
2	FARADAY	Top Hat Sand & Gravel	7983	10/25/85	Foundation
t	FARADAY	Winter Sun	3302	10/23/85	Plumbing Solar Water htr
7	FARADAY	Winter Sun	3302	10/23/85	Plumbing Solar Water htr
=	FARADAY	Top Hat Sand & Gravel	7983	10/25/85	Foundation
	FARADAY	Winter Sun	3302	10/23/85	Plumbing Solar Water htr
	FARADAY	Winter Sun		10/23/85	Plumbing Solar Water htr
w		Dan Braden			Foundation
: 11				.0120100	i odridation
			****		
		100			64 25 93 5
- 1	B 10 10 10 10 10 10 10 10 10 10 10 10 10		360.3		NO. 20 53 58

This selects all the records you've just found with the Find command.

□ Choose Copy from the Edit menu to copy these records to the Clipboard.

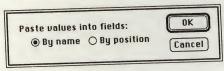
To paste the Faraday records from the Invoices - October 1986 datafile into the Faraday Invoice History datafile:

- □ Choose Open Datafile... from the File menu.
- □ Double-click on Faraday Invoice History.
- □ Select the new record by clicking on the word New.



□ Choose Paste from the Edit menu.

You'll see this dialog box:



□ Click the OK button.

You want to paste by name because the field names in your Invoices - October 1986 datafile are the same as your Faraday Invoice History datafile. The records containing the invoices for the current week of Faraday invoices are then copied into the Faraday Invoice History datafile.

### The Task Report

Next, you'll create a report using the historical information. You can use this report two ways, First, you can use the complete report, shown in Figure 8-4, to give you information about all invoices for each job by task. For each task, the report will specify the invoice date, the supplier, the cost, tax, and total cost with and without discounts. Second, you can print a summary of this report with just the totals you'll need later for comparing your actual costs to your original bids in your job cost card datafile.

Figure 8-4. A sample report by task from the Faraday Invoice History datafile

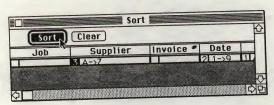
Task	Date	Supplier	Job	Subtotal	Cost
Foundation	10/24/85	Dan Braden	Faraday	45	\$45.0
			Faraday	20.1	\$20.11
	10/28/85	Dan Braden	Faraday	195	\$195.0
			Faraday	194	\$194.00
			Faraday	60.76	\$60.76
			Faraday	175	\$175.00
			Faraday	96.52	\$86.52
		Top Hat Sand & Gravel	Faraday	25	\$24.50
			Total for F	oundation:	\$900.86
Orading and Fill	10/28/85	Grader Seattle Bulldozing	Faraday	200	\$200.00
		Tota	l for Gradin	g and Fill:	\$200.00
Plumbing Solar Water htr	10/23/85	Vinter Sun	Faradau		
			Faraday	227.25	\$227.25
			Faraday	30	\$30.00
			Faraday	2,780	\$2,780.00
		Total for Dive		220	\$220.00
		Total for Plun	ioing Solar	Water htr:	\$3,257.25
				Total:	\$4,258.13

continued

	Total Cost		
\$3.51	\$48.51		
\$1.57	\$21.67		
\$15.21	\$210.21		
\$15.13	\$209.13		
\$4.74	\$65.50		
\$13.65	\$188.65		
\$6.75	\$93.27		
\$1.91	\$26.41		
\$62.47	\$863.35		
\$15.60	\$215.60		
\$15.60	\$215.60		
\$17.73	\$244.98		
\$2.34	\$32.34		
\$216.84	\$2,996.84		
\$17.16	\$237.16		
\$254.07	\$3,511.32		
\$332.13	\$4,590.26		

To get a report of invoice totals in your invoice history datafile, first sort the records so the report window is set up with the proper items already sorted.

- □ Choose Sort... from the Organize menu.
- Click first in the Task field, next in the Date field, and then in the Supplier field. Click the Sort button.



Using this criterion, File first sorts the records alphabetically by task, then sorts invoices within each task by the date of the invoice, and then by supplier.

□ Now choose Report... from the Organize menu.

Previo	□ Summary	Report		
-	A->Z	1->9	A->Z	Not Sorted
Sort Heading	Task	Date	Supplier	Job
Field	Task	Date	Supplier	Job
by Suppli	ei			
by Date				
by Task				-
Grand				

In addition to the sorted fields (Task, Date, and Supplier), the only other fields you want to view in your report are Cost, Tax, and Total Cost. So you need to drag the fields you don't want included in the report into the Not Shown area of the report window.

□ Scroll the report window to the right and click on the Invoice # field in the Field row. Hold down the Shift key and click on the Qnty, Unit, Description, Unit Price, Discount, Discount Amt, and Date Paid fields to select them as well:

Previe	w □ Summarı	Report			Uni
Sort Heading	Discount Amb	Cost	Tax	Total Cost Total Cost	Date Paid Date@aid
Field by Supplic by Date					
by Task Grand			1		

□ Hold down the mouse button and drag these fields to the right until the vertical line that appears as you start to drag is in the Not Shown area. Release the mouse button.

Scroll the report window to the left if you want to see that these fields are in the Not Shown area.

Sort		Not Show	1			
Heading	Total Cost	Invoice #	Ontu	Unit	Description	IIIni
Field	TOTAL COST	Invoice #	Ontu	Unit	Description	Uni
by Supplie					Description	Ur
by Date						-
by Task			-			
Grand						-
			letetetete			

Now you add By Task and Grand totals in the Cost, Tax, and Total Cost columns.

- □ Scroll the report window to the left until the Cost field is visible.
- Double-click in the intersection of the Cost column and the By Task row.
- $\hfill\Box$  When the dialog box appears, click in the Total box and click the OK button.



□ Do the same thing for the Cost column and the Grand row, then the Tax column in the By Task and Grand rows, and then the Total Cost column in the By Task and Grand rows.

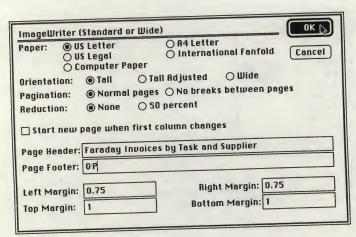
Your report window will look like this:

Previeu	□ Summ	ary Report				Not
Sort	Not Sorted Job	Subtotal	Cost	Tax	Total Cost	_
Heading Field	Job	Subtotal		Тах	Total Cost	Inv
by Supplier						_
by Date			T-4-1	Total	Total	-
by Task		-	1040.	Total	Total	4
Grand		100000000000000000000000000000000000000				

File lets you set up a report with a page header and footer. Headers and footers are text printed at the top and bottom of each page of the report. You might use a header to print the report title on each page and a footer for the report page number.

To have a header and footer printed on each page of your report:

- ☐ Choose Page Setup... from the File menu.
  - □ In the Page Header typing field type Faraday Invoices by Task and Supplier as the header text.
  - □ Click in the Page Footer typing field and type &P. to have File print the page number in the footer.
  - □ Click the OK button.



□ Now click the Preview button.

You can see an invoice report for the Faraday job arranged by task and supplier on your screen.

		Preview		
		Faraday In	voices by Tas	k and Supplier
Task	Date	Supplier	Job	Subtotal
Foundation	10/24/85	Dan Braden	Faraday	45
			Faraday	20.1
	10/28/85	8/85 Dan Braden	Faraday	195
			Faraday	194
			Faraday	60.76
			Faraday	175
			Faraday	86.52
		Top Hat Sand & Gravel	Faraday	25
			Total for F	oundation:
Grading and Fill	10/28/85	Grader Seattle Bulldozing	Faraday	200
Records process	ed: 8 Re	cords to process:	13 Paus	e Cancel

□ Click the Done button to end previewing the report. If this is what you want, choose Print Report... from the File menu, and click the OK button when the dialog box appears.

Your Faraday Invoice report will begin printing on your printer.

Next, to get a summary report with just the task total information that you will use later in the job cost card datafile:

- $\hfill\Box$  Click the Summary Report box in the report window.
- □ Choose Print Report... from the File menu and click the OK button when the dialog box appears.

Your printer will print a summary report that looks like the report in Figure 8-5.

Figure 8-5. A sample summary report with task totals

Task Foundation	\$800.88	Tax \$62.47	Total Cost \$863.35
Grading and Fill Plumbing Solar Water htr	\$200.00 \$3,257.25	\$15.60 \$254.07	\$215.60
Total:	\$4,258.13	\$332.13	\$3,511.32 \$4,590.26

This report looks small now, with only a few tasks. But as the job progresses, it will show more and eventually will display all of the tasks in the job. You will need to run this report for each job every week to get the actual cost totals per task to add to the job cost card datafile.

### **Making Job Cost Cards**

Now you need to set up the job cost card datafile for each job where you'll add the summary information by task. This is a fairly easy thing to do because the job cost card is simply the Faraday Bid datafile with a new name and three additional fields. You use the Faraday Bid datafile until the bid is accepted and you start construction. At that point, you rename the datafile from Faraday Bid to Faraday Job Cost Card. To rename the Faraday Bid datafile:

- □ Choose Quit from the File menu.
- □ On the Macintosh desktop, select the Faraday Bid datafile by clicking on its icon and type *Faraday Job Cost Card*. Then press Return.
- □ Double-click on the Faraday Job Cost Card icon to open it.
- □ Choose Show Form from the Form menu.

To complete the job cost card, you need to add these fields:

Actual

This field will contain the totals from each task, copied in from the job's invoice history datafile summary report.

Difference

This computed number field contains the difference between the actual amount spent on each task and the original bid for each task. If you've exceeded the bid amount, File displays the difference in parentheses to indicate a negative number.

• % of Bid

This computed number field tells you what percentage of your total bid your actual cost per task is.

To add these fields:

- □ If necessary, click in the empty field to the right of the Bid Total field to get an insertion point.
- □ Type Actual and press Return.
- $\hfill \square$  Press the N key (for Number), then press Return to move to the next empty field.
- □ Type Difference and press Return.
- $\hfill\square$  Press N and then press Return to move to the next field.

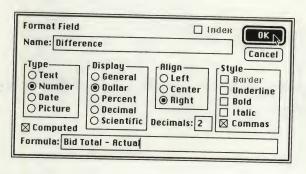
- □ Type % of Bid and press Return.
- ☐ Press N and then press Return.

To format the Actual field for Dollar display:

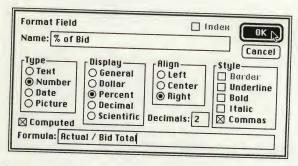
- □ Double-click on the Actual field.
- ☐ In the dialog box, click the Dollar button in the Display box, then click OK.

To add formulas to the Difference and % of Bid fields:

- □ Double-click on the Difference field.
- □ Click the Dollar button in the Display box, click in the Computed box, and click an insertion point in the Formula typing field.
- □ Type Bid Total Actual and click OK.



- □ Double-click on the % of Bid field.
- □ Click the Percent button in the Display box, click in the Computed box, and click an insertion point in the Formula typing field.
- ☐ Type Actual / Bid Total and click OK.



(The slash is the symbol computers use for division.)

To make it easier to copy in the totals from the summary report, let's make another form for this datafile that has only these fields:

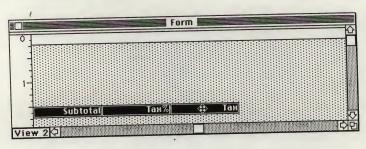
Task Bid Total Actual Difference % of Bid

### To do this:

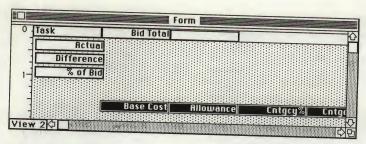
□ Click in the view box in the lower left corner of the form window to change from view 1 to view 2.

	Farada	y Job Cost Card		
_	Task	Base Cost	Allowance	Cntgo
1	Cabinets	\$4,745.20	\$3,175.00	
2	Concrete Finishing	\$2,555.20		
3	Doors	\$1,691.20		
4	Drywall	\$1,753.00		
5	Electrical	\$1,799.50	\$850.00	
6	Exterior Siding	\$1,869.44		
7	Finish carpentru	\$1.071.04		
		Form		
	ITask	Base Cost	Allowance	Сг
0	- Task		Allowance	Cr
0	- Task		Allowance	Cr
0	- Task		Allowance	Cr
0	Task		Allowance	Cr
0	Task		Allowance	Cr
0	Task		Allowance	Cr

- □ Select all fields except Task, Bid Total, Actual, Difference, and % of Bid by holding down the Shift key and clicking on each one.
- □ Release the Shift key, then drag the selected fields down into the hide area, near the bottom of the form window. Then release the mouse button.

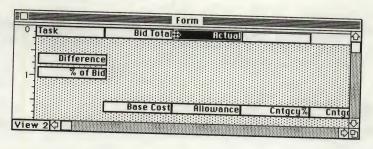


□ Scroll the form window all the way to the left.



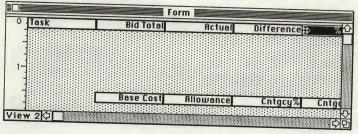
Notice that the Actual, Difference, and % of Bid fields are in the hide area. They were new fields added to your view 1 form. File automatically placed these new fields in the hide area when you switched to view 2. To use these fields in your view 2 form, you have to move them up to the visible portion of the form.

 Drag the Actual field up and to the right until the vertical line that appears as you start to drag is to the right of the Bid Total field.
 Release the mouse button.



□ Now place the Difference field next to the Actual field, and then put the % of Bid field next to the Difference field.

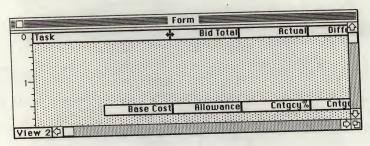
Your form window should look like this:



Next, restore the formatting that was lost when you changed to view 2.

- □ Click on the Bid Total field to select it.
- □ Hold down the Shift key and click on the Actual and Difference fields.
- $\hfill\Box$  Choose Format Number Field... from the Form menu.
- $\hfill\Box$  Click the Dollar button in the Display box, then click OK.

- □ Double-click on the % of Bid field. When the dialog box appears, click the Percent button in the Display box and click OK.
- □ Finally, place the mouse pointer on the right side of the Task field, hold the mouse button down, and drag to the right until the Task field is twice its original size. Release the mouse button.



☐ Choose Save Form from the File menu, and File will save this form as the view 2 form of your Faraday Job Cost Card datafile.

In addition to saving the form with the datafile, save this form separately so that when you create the next job cost card datafile, you can just load it in rather than add and format these same fields each time.

- □ Choose Save Form As... from the File menu.
- □ Type Job Cost Form as the name of the form and click Save.

To arrange the records in the same order as the report you will be entering information from:

- □ Click anywhere in the datafile window to make it active.
- □ Choose Sort... from the Organize menu.
- □ Click in the Task field, then click the Sort button.

Your datafile window will now look like this:

**★** File Edit Form Organize

	Farad	lay Job Cost Card 🗏		I pisse
	Task	Bid Total	Actual	Differ
1	Cabinets	\$7,920.20		\$7,9
2	Concrete Finishing	\$2,738.66		\$2,7
3	Doors	\$1,812.63		\$1,8
4	Drywall	\$1,878.87		\$1,8
5	Electrical	\$2,739.48		\$2,7
6	Exterior Siding	\$2,003.67		\$2,0
7	Finish carpentry	\$1,205.34		\$1,2
8	Floors-carpet	\$1,667.72		\$1,6
9	Floors-vinyl	\$237.94		\$2
10		\$988.99		\$9
11		\$302.78		\$3
12		\$93.32		3
13		\$2,464.28		\$2,4
14		\$700.00		\$7
		\$50.00		
15		\$1,879.13		\$1,8
10	Plumbing fixtures Plumbing rough & trim	\$1.848.86	~~~~~~innoneneeeeeeeee	\$1.5
22	722			5

Click an insertion point in the Actual field for the first task that you have actual information for, and begin typing in totals from the Total Cost field in the report printed from the job's historical datafile. There is a shortcut to advance the insertion point to the same field of the next record (in this case, the Actual field). Simply hold down the Command key and press the Enter key.

You enter the information for the Actual field and File computes the Difference and % of Bid fields and displays those amounts, which you can see by scrolling the datafile window to the right.

		Faraday	Job Cost Card		
-	Bid Total	Actual	Difference	% of Bid	
-	\$4,335.63		\$4,335.63	0.00%	-
~				0.00%	<b>-</b>
TP	\$2,003.67	-			_
10	\$988.99	40.45	\$2,003.67	0.00%	
11		\$863.35	\$125.64	87.30%	
-	\$911.03		\$911.03	0.00%	
12	\$1,812.63		\$1,812.63	0.00%	-
13	\$2,739.48		\$2,739.48	0.00%	
14	\$2,738.66		\$2,738.66		
15	\$1,848.86		\$1,848.86	0.00%	
16	\$1,205.34			0.00%	
7	\$7,920.20		\$1,205.34	0.00%	
	BRRBBRRRRRRRRRRR	NIVIOY	\$7,920.20	0.00%	

As you continue entering actual costs next to bid totals, you can see how useful File can be as you track costs for each job. Each time you enter invoice information in your job cost card datafile, you can see how closely your actual costs parallel your bid. If you enter this information weekly or at regular intervals, you'll have the tools at your disposal to make the necessary changes to your contingency costs and stay within budget.

When you finish a job, you can look at the information in the invoice history datafile for that job, analyze places where your bidding was good and where it was not, and make appropriate changes in the master copy of the Bid Master datafile to make future bids more accurate.

### **Maintaining Your Invoice Datafile**

You'll want to organize your files so you can find specific information quickly and so you can avoid running out of disk space. It's a good idea to have a separate disk for each job. For example, the Faraday disk would initially contain the Faraday Bid Master and the Faraday Bid datafiles. Later you'd rename the bid the Faraday Job Cost Card and add the Faraday Invoice History datafiles. With only one job per disk, there should be plenty of room.

As you enter more and more invoices on your Outstanding Invoice datafile, you will eventually fill up a disk. I have found that 400 invoices take up about 90K of disk space. If you have approximately 400 invoices per month, you should be able to keep four months' worth of invoices on one disk. Unless you have an extremely large volume of invoices, you shouldn't need to start a new invoice disk each month. But when you do need to start a new disk or if you want to limit the information on each disk to one month, it's a good idea to start at the beginning of a month rather than somewhere in the middle. There are two additional reports that we'll create and run on the Outstanding Invoices datafile at the end of each month, so it's best to keep data for an entire month together.

When you do need to start a new invoice disk, simply stick a label on the old one and write a name on it (something like Invoices: January - April 1985). Then insert a new disk, make a copy of the Outstanding Invoices skeleton file on it, rename it to reflect the current time period, then double-click on the icon of the copy to open the datafile, and you're ready to start entering information on your new disk.

### **Two Monthly Reports**

You can generate two more reports from the outstanding invoices data. One is a summary of invoice information by supplier. This report is sorted by date so that each month you can see how much you've paid each supplier. You can check the totals by supplier against those in your checkbook and see that the figures match.

The other monthly report you can generate from outstanding invoices is an individual task summary by job and supplier. With this report, you can check suppliers to see how their prices change over time. If you have several suppliers for the same item, you can compare prices.

To produce an invoice report by supplier to compare with your checkbook totals at the end of the month:

☐ Load the Invoices - October 1986 datafile.

If you want a monthly report and have more than one month's worth of invoices in the Invoices - October 1986 datafile:

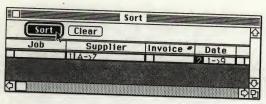
- □ Choose the Find... command from the Organize menu.
- Click the Clear button to remove any previous Find criteria and click in the Date field. Type in the month number followed by an asterisk. Click the Find button.



The asterisk is a wildcard search character that will locate any October date.

To set up the monthly report:

- ☐ Choose Sort... from the Organize menu.
- Click the Clear button in the sort window to clear previous sort criteria.
- $\hfill\Box$  Click in the Supplier field to make Supplier the primary sort.
- $\hfill\Box$  Click in the Date field to make Date the secondary sort.
- □ Click the Sort button.



Next, open the report window.

□ Choose Report... from the Organize menu.

Your report window should have the sorted fields on the left in the Sort area and the ones that are not sorted on the right in the Not Sorted area.

Sort	A->Z	1->9	Not Sorte	1	
Heading Field	Supplier	Date	Job	Invoice *	Ta
by Date	Supplier	Date	Job	Invoice #	
by Suppli	e	-	-		
Grand		-	-		

If your report window doesn't look like this and you've sorted as described above, it may be because File has saved a previous report with the Outstanding Invoices datafile.

To clear the report window and sort a report with the sort criteria you just established:

☐ Choose New Report from the File menu.

File may display a dialog box asking if you want to save the current report with the Invoices - October 1986 datafile. If so, click the No button.

File will then reset the report window and display a new report in the report window with the sort criteria you specified.

The fields you need in this monthly report are:

- Supplier
- Date
- Description
- Discount Amt
- Cost
- Tax
- Total Cost

So you need to drag the remaining fields into the Not Shown area of the report window.

- □ Click the Job field in the Field row to select it.
- □ Select the Invoice #, Task, Qnty, Unit, Unit Price, Subtotal, Discount, and Date Paid fields as well by holding down the Shift key and clicking on each one, then release the Shift key and drag them to the right until the vertical line that appears as you start to drag them is in the Not Shown area. Release the mouse button.

You can see that these fields are in the Not Sorted area by scrolling the report window to the left.

Previeu		Summary F Not Shown			
Sort Heading	Cost	Job	Invoice *	Task	Qnty Unit
Field		Job	Invoice #	Task	Qnty Unit
by Date		}			
by Supplier					
Grand		1			

Next, you need to add totals to the Discount Amt, Cost, Tax, and Total Cost fields in the report window.

- □ Scroll the report window to the left until the Discount Amt field is visible.
- Double-click in the intersection of the Discount Amt column in the By Date row. When the dialog box appears, click in the Total box and click OK.
- □ Double-click in the intersection of the Discount Amt column in the By Supplier row. When the dialog box appears, click in the Total box and click OK.

- Double-click in the intersection of the Discount Amt column and the Grand row. When the dialog box appears, click in the Total box and click OK.
- ☐ Follow these steps for the Cost, Tax, and Total Cost columns so that your report window looks like this:

Heading	Discount Amt	Cost	I Tau		Not Sho
Field	Discount Amt	Cost		Total Cost	Job
by Date	Total		Total		Job
by Supplier	Total		1	Total	
Grand	Total		-	Total	
13		1000	110(91	Total	

Before printing this report, you can use Page Setup... from the File menu to add a header and footer to the report and to change the margins. Recall that headers and footers are text that will appear on the top and bottom of each page when the report is printed.

- □ Choose Page Setup... from the File menu.
- □ Type Invoices by Supplier in the Page Header box.
- □ Click an insertion point in the Page Footer box and type &D Page &P.

These are codes that tell File to put the current date from the Macintosh system calendar and the page number on the bottom of each page in the page footer.

□ Click the Wide button in the Orientation row.

This tells File to print the report sideways on the page.

- $\hfill\Box$  Double-click in the Left Margin box and type 0 to change the left-margin value to 0.
- $\Box$  Double-click in the Right Margin box and type  $\theta$  to change the right-margin value to  $\theta$ .

Since this is such a wide report, all of the columns will fit on one page only by printing it sideways without left or right margins.

□ Click the OK button.

lmageШri	ter (Standard o	or Wide) OK
	● US Letter ○ US Legal ○ Computer P	○ R4 Letter ○ International Fanfold Cancel
Orientati	on O Tall	O Tall Adjusted
Paginatio	in:   Norma	pages O No breaks between pages
Reductio	n:   None	○ 50 percent
	new page wher	n first column changes by Supplier
Page Foo	ter: &D - Page	e &P
	gin: 0	Right Margin: 0

To print the monthly report:

□ Choose Print Report... from the File menu and click the OK button when the dialog box appears.

The printed report will look something like the report in Figure 8-6.

You can compare these totals by invoice date against the dates in your checkbook for checks written to suppliers to make sure the figures match in both places and you haven't made any typing errors.

To save this report form so you can run it each month:

- ☐ Choose Save Report As... from the File menu.
- □ Type Invoices by Supplier Report as the name of the report, then press Return.

The second report you can create is a task summary by job and supplier. This report will have only four fields: Task, Job, Supplier, and Total Cost. You can use this report to compare costs on the same task by different suppliers at different jobs.

For this report, you need to sort your datafile by task, job, and supplier. You can run this report on all the invoices contained in your outstanding invoices datafile or you can find only those for a particular month within the datafile. This report is probably most useful if it covers a large number of invoices. That way you can compare more suppliers and jobs for each task.

- □ Click anywhere in the datafile window to make it active.
- □ Choose Show All Records from the Organize menu.
- □ Choose the Sort... command from the Organize menu.
- □ Click the Clear button to remove previous sort criteria, click in the Task field, then in the Job field, and next in the Supplier field to set up the order of the sort criteria.

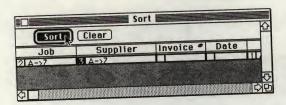
Figure 8-6. A sample monthly invoice summary report by supplier

		11	rvoices by Suppli	er		
Supplier	Date	Description	Discount Amt	Cost	T	
Big D Trucking	10/13/85	Dumptruok rental	\$0.00	\$331.63	Tax	Total Cos
		Total for 10/13/85:		\$331.63	\$25.87	\$357.5
				69.165	\$25.87	\$357.5
	Tota	l for Big D Trucking:	\$0.00	\$331.63	\$25.87	\$357.5
Den Braden	10/24/85	anohor bolts	\$0.00			
		corners in foundation	\$0.00	\$20.10	\$1.57	\$21.6
		Forming labor	\$0.00	\$45.00	\$3.51	\$48.5
		Total for 10/24/85:	\$0.00	\$1,597.50	\$124.61	\$1,722.1
			40.00	\$1,662.60	\$129.68	\$1,792.20
	10/28/85	concrete step down	\$0.00	\$195.00		
		dirt steps	\$0.00	\$175.00	\$15.21	\$210.21
		rapid ties	\$0.00	\$60.76	\$13.65 \$4.74	\$188.65
		2x4 order sills	\$0.00	\$86.52	\$6.75	\$65.50
		rebar placement	\$0.00	\$194.00	\$15.13	\$98.27
	1	otal for 10/28/85:	\$0.00	\$711.28	\$55.48	\$209.13 \$766.76
	To	tal for Dan Braden:	\$0.00	\$2,873.88	\$185.16	\$2,559.04
rader Seattle Buildozing		Grade inside Foundation	\$0.00	\$125,00	\$9.75	\$134.75
	T	otal for 10/14/85:	\$0.00	\$125.00	\$9.75	\$134.75
	10/28/85	Baokfill				¥104.75
			\$0.00	\$200.00	\$15.60	\$215.60
		otal for 10/28/85:	\$0.00	\$200.00	\$15.60	\$215.60
Total fo	r Grader 9	seattle Bulldozing:	\$0.00	\$325.00	\$25.35	\$350.35

	-		
con	tin	2100	l

Supplie	Date		ivoices by Suppli	er		
	Date	Description	Discount Amt	Cost	Tax	Total Cos
		Total for 10/28/85:	\$0.50	\$24.50	\$1.91	\$26.4
	Total for To	op Hat Sand & Gravel:	\$21.73	\$1,064.74	\$83.05	\$1,147.7
Western Crane	10/2/85	Fuel for Boom truck, beams Boom truck for placement of b	\$0.00 \$0.00	\$5.75 \$135.00	\$0.45 \$10.53	\$6.2 \$145.5
		Total for 10/2/85:	\$0.00	\$140.75	\$10.98	\$151.73
	Tota	1 for Western Crane:	\$0.00	\$140.75	\$10.98	\$151.72
vinter Sun	10/23/85	Setting and Delivery Bypass Valve Tax 7.5% (Tacoma) Entech SunFlame water heater:	\$0.00 \$0.00 \$0.00 \$0.00	\$220.00 \$30.00 \$227.25 \$2,780.00	\$17.16 \$2.34 \$17.73 \$216.84	\$237.16 \$32.34 \$244.96 \$2,996.84
		Total for 10/23/85:	\$0.00	\$3,257.25	\$254.07	\$3,511.32
	T	otal for Winter Sun:	\$0.00	\$8,257.25	\$254.07	\$3,511.32
		Total:	\$40.60	\$9,258.68	\$722.18	\$9,980.86

### □ Click the Sort button.



- □ Choose Report... from the Organize menu and after the report window appears choose New Report from the File menu.
- □ Drag all the fields except Task, Job, Supplier, and Total Cost to the right into the Not Shown area.

Scrolled all the way to the left, your report window should look like this:

Previe	w □ Summar		14 . 7	Not Sorte
Sort	A->Z	A->Z	A->Z	Total Cost
Heading	Task	Job	Supplier	Total Cos
Field	Task	Job	Supplier	- istarcov
by Suppli	e			
by Job				
by Task				
Grand			1010 10	

- □ Double-click in the intersection of the Total Cost column and the By Supplier row.
- $\hfill\square$  When the dialog box appears, click the Total box and click OK.

Now all you need to do to this report is add a header and footer. To add a header and footer:

- □ Choose Page Setup... from the File menu.
- $\hfill\Box$  In the Page Header box type Task Summary by Job and Supplier.

This header will be printed at the top of each page.

□ Click an insertion point in the Page Footer box and type Page &P.

As mentioned earlier in this chapter, the &P code in the Page Footer box tells File to print a page number at the bottom of each page.

□ Click the OK button.

Now the report is ready to print.

□ Choose Print Report... from the File menu. When the dialog box appears, click the OK button to begin printing.

Your printed report should look something like the report in Figure 8-7.

Figure 8-7. A sample monthly invoice report by task

	Teel	Summery by Job end	Supplier	
Task	Job	Supplier	Total Cost	
undation	Faraday	Dan Braden	\$210.21	
			\$188.65	
			\$48.51	
			\$93.27	
			\$65.50	
			\$21.67	
	Tot	lal fam b i a	\$209.13	
	701	tal for Dan Braden:	\$836.94	
		Top Hat Sand & Bravel	\$26,41	
			\$443.70	
	Total days		\$27.73	
	TOTAL FOR TOP I	Hat Sand & Gravel:	\$497.85	
	Miller	Dan Braden	\$1,722.11	
	Tota	al for Dan Braden:	\$1,722.11	
		Top Hat Sand & Gravel		
		. ob ver could or 05.9461	\$475.32	
	Total for Top H	at Sand & Gravel:	\$16.68 \$492.00	
ng and Fill			<b>**72.00</b>	
	Faraday	Grader Seattle Buildozing	\$215.60	
1016	al for Grader Se	attle Bulldozing:	\$215.60	
	Miller	Big D Trucking	A	
	Total for	r Big D Trucking:	\$357.50	
	,		\$357.50	
Tota	I for Cond a s	Grader Seattle Buildozing	\$134.75	
, 510	or brader Sea	ittle Bulldozing:	\$134.75	
		S& A Backhoe	\$54.98	
	Total fo	or S&A Backhon		
	Total fo	pr S&A Backhoe:	\$407.48 \$462.46	

	Tes	sk Summery by Job end :	Supplier
Task	Job	Supplier	Total Cost
Grading and Fill	Miller	Top Hat Sand & Gravel	\$157.9
	Total for To	P Hat Sand & Gravel:	\$157.94
Overhead - Rentals	Faraday	Western Crane	\$6.20
	Total	for Western Crane:	\$6.20
	Miller	Western Crane	A
	Total	for Western Crane:	\$145.53 \$145.53
Rough Carpentry	Faraday	Ron's Lumber	4074 40
	Tota	I for Ron's Lumber:	\$876.42 \$876.42
	Miller	Ron's Lumber	\$116.42
	Total		\$3.70
	lota	for Ron's Lumber:	\$120.12

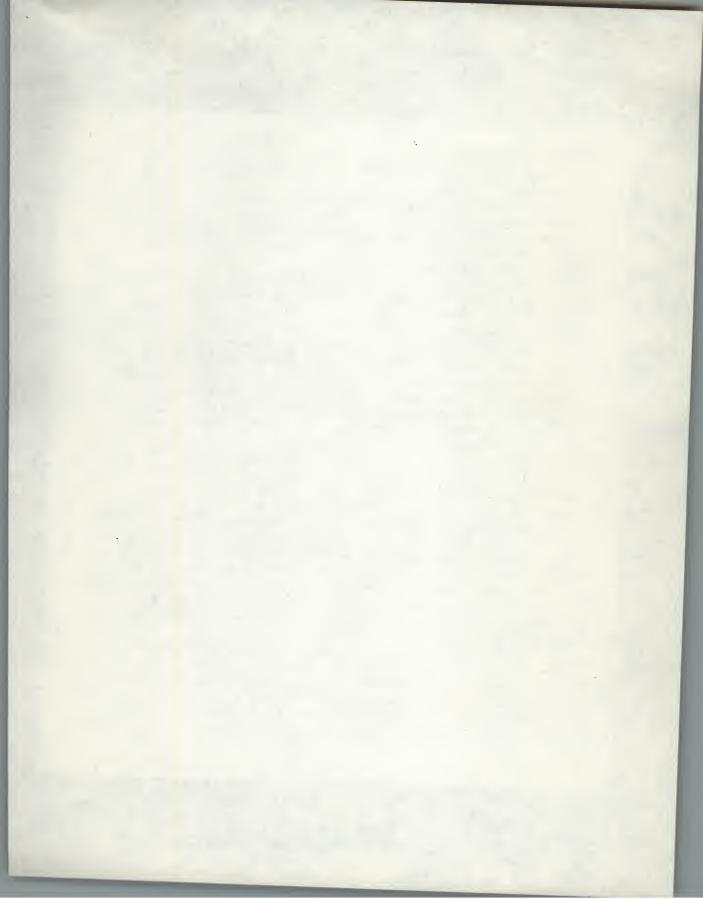
□ Choose Save Report As... from the File menu. When the dialog box appears, type Task Summary Report as the name of the report. Click the Save button.

Whenever you want to run this report for your outstanding invoices datafile (probably every quarter), you just open the report window, choose Open Report... from the File menu, double-click on Task Summary Report in the dialog box, and it will be ready to print.

Now that you know how to set up these reports, you can follow the same procedures and make reports with any information you'll find useful. Experiment with reports using different categories and different totals until you get

exactly the information you need. Now you know how to use the information in the Outstanding Invoices datafile to track actual costs and compare these costs to your bids. This bidding and tracking system will make your bids more complete and, consequently, more accurate, and the cost-tracking system will help you monitor costs so you know how your actual costs compare to your bids week by week. Having this information at your fingertips will be a real aid to monitoring costs and staying within your estimated cost of work. And, if you're like Ralph Biltwell, you'll have more time for fishing.

You might also like to use File for keeping a list of names and addresses of customers. In Chapter 10, you'll learn how to merge this list with a Microsoft Word document so you can do things like send customized invoices. You might also like to keep a datafile containing a list of names and addresses of laborers, with information about the type and quality of work they do, how to contact them, and the hourly rate they're paid. Then when you need an extra worker, you can quickly sort this datafile by type of work and come up with a list of names and phone numbers.



In this section, we take File one step further and use it with other computers

and programs.

Chapter 9 shows how to use File with information from a mainframe computer. Many companies (perhaps your own) use large mainframe computers to produce monthly and weekly reports. If, instead of getting these reports on paper, you could transfer them directly into File, you could more easily compare the information they contain with

information you already have in File.

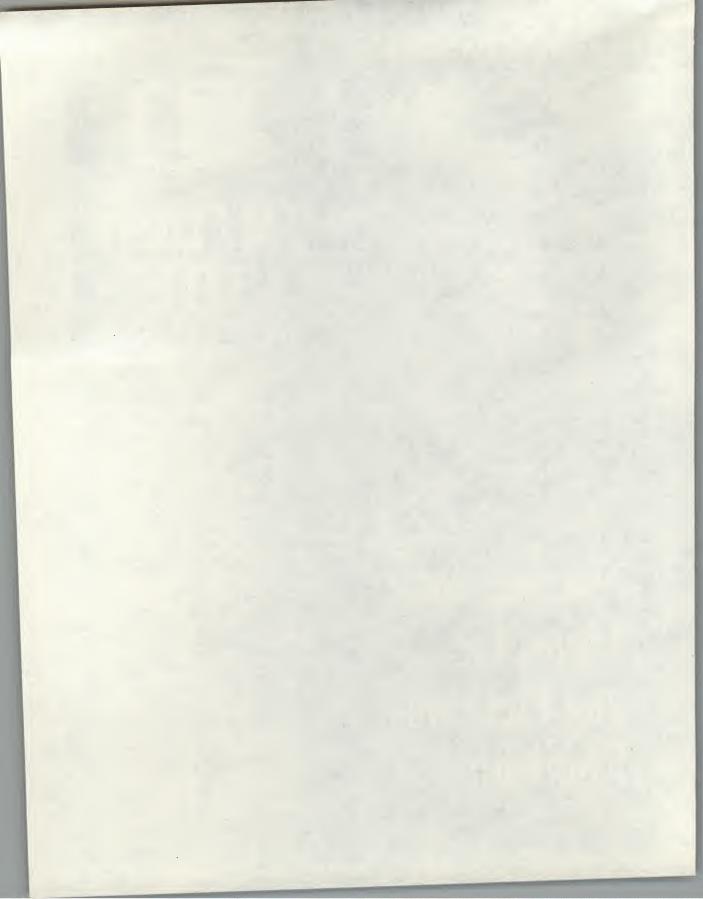
Chapter 9 shows how the sales-support division of Chips, Inc., a company that manufactures electronic components, uses File and information from the company mainframe to track the sales of its high-tech products. Because the employees in the salessupport division help prospective customers decide which of Chips, Inc.'s components to use in their new products but do not actually sell directly to the customers, they need to be able to keep track of a number of customers over a long period of time. They store sales-support information about customers and products in File, and they need to compare this information to actual sales information from company headquarters to measure their effectiveness. Chapter 9 shows how the sales-support division tracks information about customers, and then gets the company sales information from the mainframe and transfers it to File so they can compare their projections to actual sales.

Chapter 10 shows how to use File with its companion products—Microsoft Word (a word-processing program), Microsoft Chart (a business-graphics program), and Microsoft Multiplan (a spreadsheet program), all of which have similar file formats and are designed to work together. Information from File alone is useful. But Multiplan can do calculations that File cannot do, and you can set up a Multiplan worksheet to do calculations and use the results of these calculations in a File datafile. You can also use information from a Multiplan worksheet to make a chart using Microsoft Chart and then copy this chart into File. And you can copy charts from Chart and worksheets from Multiplan into Microsoft Word to make letters and memos more eye-catching and informative. Then you can merge these letters or memos with names and addresses from a File datafile to produce "personalized" form letters. All of these are tasks you could

not do with File alone. In Chapter 10, you'll see how a book-publishing company called Fictitious Publishing uses information from a Multiplan forecast in Chart to make graphs that plot a comparison of actual and forecast sales. The graphs from Chart are copied into a quarterly sales datafile and are also used in a Word memo that is sent to employees in another department whose names are in another of File's datafiles. Word then merges information from the File datafile to make personalized memos.

# SECTION FIVE

Sharing Data: Chips, Inc. and Fictitious Publishing



# Sharing Data from a Mainframe Computer



Previous chapters have shown how to use File and the Mac to help manage small businesses. This chapter demonstrates how to use File and the Mac both for tasks entirely within a department of a medium- to large-sized company and also for tasks that require establishing communication with an information service to get information stored there by the company's mainframe computer.

For our example, we'll look at the field service department of a company that manufactures electronic components. Field service engineers (FSEs) in this department lay the groundwork for most of Chips' sales by encouraging companies that are designing high-tech products to incorporate Chips components into their designs. (Chips uses the buzzword "design-in" to describe this process of incorporating Chips components into the design of products.)

After identifying a product that could incorporate Chips components, an FSE files a report assessing the chances that the components will actually be part of the final specifications. Chips uses this assessment in deciding whether to pursue sales for a particular product. FSE reports also include comments about the relevance of specific components to these products and to similar products. These comments help the Chips manufacturing division determine the direction the development of its own components should take.

Since FSEs don't actually sell the components, Chips frequently doesn't know which, if any, of its components have been incorporated into the design of a new product until the firm developing the product places an order with Chips' purchasing department (sometimes through a distributor). This may not occur until six months to two years after the FSE originally identified the possible use of a Chips component. Consequently, long-term tracking of projects is important to Chips in getting an accurate picture of how its components are doing in the marketplace.

The manager of the field-service department is Diana Folger, whose job it is to track component-line activity and monitor the progress of new products identified by the FSEs in her group. Diana keeps an informal set of notes on each of these projects for her group. She tracks which projects her FSEs won (Chips components were incorporated in the design), which ones they lost, and which ones were discontinued (for example, because of a funding cut or a shift in the customer's business plan). She also keeps a components list for every project so she can see how many of Chips' products are used. Then, when appropriate, she notifies her counterpart in standard components about potential sales.

Diana regularly gets a printout from corporate headquarters detailing actual sales of Chips, Inc.'s products to the customers her group serves. She uses this printout to compare her FSEs' predictions to actual sales. She also looks for sales to companies that aren't served by any of her FSEs. In addition, the printout shows which parts her customers are using. Sometimes she is not aware of all the

parts customers are using, and she can get that information here.

Diana has for some time felt the need for a system that will integrate all of these separate pieces of information into one database. To help her with this

task, she has just bought a Macintosh and Microsoft File.

Just last week Diana saw Charlie Faulkner, the Boston FSE manager, at the company's national meeting. In discussing several current projects their FSEs were working on, they each found that an FSE in the other's office had discovered a solution to a problem that was perplexing one of their own FSEs. When Diana discovered that Charlie also had a Mac, the two of them agreed to create a datafile and a set of forms they could use to trade information on a regular basis. Charlie currently requires all his FSEs to complete the paper form shown in Figure 9-1.

In talking to other managers at the company meeting, Diana and Charlie found that although the managers like the Macintosh, they have decided to wait and see how Diana's and Charlie's system works before committing to using

File and the Mac.

In the information-sharing system they worked out, Diana and Charlie decided they want the following reports:

- New-product development projects grouped by Chips component
- Field service engineer activity
- FSE notes and remarks
- Monthly win/lose/gone status

They've agreed to swap FSE "notes and remarks" about how customers are using Chips' products. Since Chips, Inc. does not yet have an electronic mail system, they'll use a mailbox in an electronic information service such as Compu-Serve. Diana will put her information into Charlie's CompuServe mailbox, and Charlie will then forward Diana's information to the Chips manufacturing division so Chips designers can find out what customers and FSEs think of the company's products.

Figure 9-1. A paper form used by Chips, Inc. field service engineers

	DESIG	N-IN INFORM	ATION	
Office			Date	
51110		Territory		
			City	
Customer			Code	
Distributor Name			Code Referral Number	
			Number	
Possible Volume_		Probabi Decision	lity	
CPU		Applicat	ion	
Systems		Applicati	h	
Support Products_		•		
Outcome (enter dat	te): Won	Lost	Gone	
NOTES:	******************			
EMARKS:		***********************		

Diana also volunteered to talk to the corporate Management Information Systems (MIS) manager (the person in charge of the company's mainframe information) about generating a specially formatted electronic version of the monthly sales report and storing it in Diana's CompuServe mailbox. She and Charlie will then dial up CompuServe, electronically transfer the files containing the monthly report from CompuServe's computer to their Macs (a process called downloading) using a modem and their favorite communication program, and then use File and the Mac to sort through the information in the report.

In this chapter, we'll see how Diana and Charlie set up the sales support (Design-In) information datafile. Then we'll look at how they use this datafile to generate the four reports they agreed on. Next, we'll see how they use the Mac to connect to the information service and download monthly sales data into File.

Finally, we'll see how they change the form of their sales support datafile so it will be more useful when used together with the monthly information they get from Chips Inc.'s mainframe via CompuServe.

Conceptually, it might seem better for Diana and Charlie to have started at the beginning with a datafile that is compatible with the mainframe data. But as is often the case in the real world, conditions changed after they started their project. Chips' mainframe information was not available when the project started, so Diana and Charlie decided to minimize change by making their first File forms resemble the paper forms they and the other employees were used to working with. Then later, when they were able to get reports from the company mainframe into File and computers were more accepted by the other employees, Diana and Charlie changed the original datafile's form so File could use the mainframe's information. What this did was manage the change so there was not resistance to too much change at once.

# **Making the Sales Support Datafile**

First Diana creates the form for her Sales Support datafile that closely resembles Charlie's paper form. Then her FSEs add Design-In information. The final product looks like the sample in Figure 9-2.

### **Creating the Design-In Form**

Dutcome: Win

If you want to make a form that resembles this paper form, you can't use List Helper, File's default form. (A List Helper form is a simple horizontal layout

Design-In Information..... Date: May 25, 1985 Territory: Western Office: Bellevue, WA FSE: Ralph Hodgekiss Code: WBL-ATL-01 Customer: AlphaTel Referral Number: B85-019 Distributor: Wonder Supply Probability: 50% Design Number: 85-ATL-01-1 Decision By: May 25, 1985 Possible Volume: 125,000 Application Spec: SLIC/SAM/FIBE CPU: C189068 High Tech: C14623,C14624 Support Products: Bus and Com Drivers

Figure 9-2. A sample record from the Sales Support datafile

(win, lose, gone)

features we offer is enticing to them.

hardware is a definite plus.

Notes: Three-line home-telephone exchange. The single-chip solutions we offer look good. The species right for their low-end application and the hardware/software support of species right for their low-end application and the hardware/software support of species and species and species and species are supported to the species of the species and species are species as the species of the species and species are species as the species are species are species are species are species as the species are species are species are species are species as the species are species are species as the species are species ar

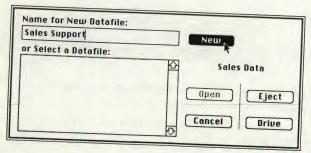
marks: Creating a low-cost application requires aggressive pricing and a strong look at how our set of features meshes with theirs. Packaging a software skeleton with the

Figure 9-3. The finished Design-In form

0	Design-In Inform	ation			]	
	Office. Office		Pate:			
	Costomer Custon	mor N	City:	ity		
1	Distributor Distrib	utor T	Code:	ustomer Code		
	-		kelerral Humber.	istributor Ref		
	Possible Volume Poss	gn Number	Probability:	Probability		
2-			Decision By	ecision By		
1 4	CPU CPU/Memor Systems: Systems	y	Application Spec.	Application Sn		
-	Support Products Supp	ort Producte	High Tech. High	ech		
3-	Outcome. Outcome	[win, lose, gone]				
	Motes Notes					
4						
4	Remarks: Remarks					
4-	Remarks: Remarks					
4-	Remarks Remarks					

of the fields in each record.) You have to remove the check from List Helper in the Form menu and design your own form. When you're finished you'll have a form that looks something like the one shown in Figure 9-3.

- $\hfill\Box$  On the Macintosh desktop, double-click on the Microsoft File icon to open File.
- □ When the dialog box appears, type *Sales Support* as the name of your new datafile.
- Insert a blank disk in your external drive, initialize it if necessary, and give it a descriptive name such as Sales Data.
- □ Click the New button.



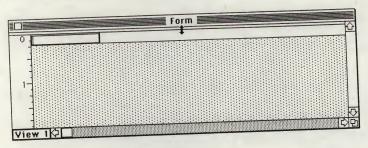
When the form window opens, a List Helper form is displayed.

#### Adding a heading

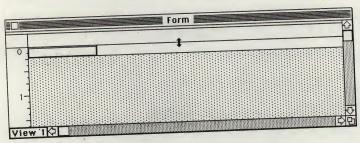
First, we'll add a heading to our form that clearly identifies the form, both when the form is on the screen and when the records are printed. To add a heading, we need to remove the check mark from the List Helper command and use a non-List Helper form.

When you want a heading in one of your forms, it's a good idea to create the heading before you enter field names and information types. If you don't make a heading before entering a field name and assigning it an information type, File automatically creates a heading label for that field and places it in the heading area, which is initially "hidden" behind the fields in the form window. When you pull down the top of the form to expose the heading area, you'll see these labels, and you'll have to delete them or drag them into the patterned hide area at the bottom of the form window before you can create the heading.

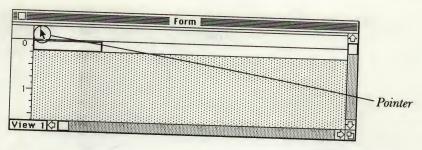
- $\square$  Move the mouse pointer to the line along the top of the form.
- □ When the mouse pointer looks like this:



drag the line down to the ¼ inch mark on the ruler and release the mouse button to make room for a heading.

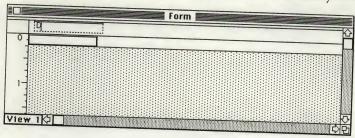


- Pull down the Form menu and choose List Helper to remove the check mark and choose a non-List Helper form.
- Position the pointer above the first field and click the mouse button to get an insertion point.

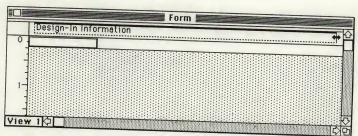


☐ Type Design-In Information as the heading.

As soon as you start typing, a heading box appears around what you're typing.

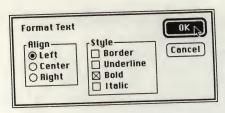


- □ Position the mouse pointer on the right edge of the heading box and pull it to the right until it is almost as wide as the screen.
- □ Release the mouse button.



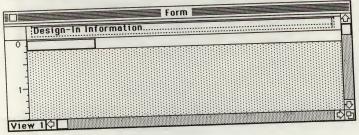
Since the heading label is already selected (the small bar along the top of the form is darkened), you can make the heading text bold so it stands out.

- □ Choose Format Text... from the Form menu. When the dialog box appears, click the Bold box in the Style list box.
- □ Click the OK button.



☐ To add a line of periods after the heading as a cosmetic touch, click to get an insertion point immediately after the word Information and type periods until you reach the right edge of the screen.

Your heading will look like this:

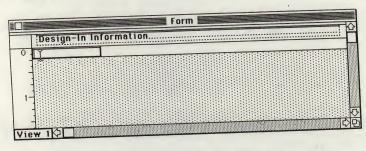


Your heading is now complete.

## **Entering field names and information types**

Now you're ready to create the fields you'll use in the Sales Support form.

□ Click to put an insertion point in the first field.



- $\square$  Type *Date* as the name of the first field and press Return.
- Press D to choose the Date information type and press Return once again.

☐ In the same way, enter the following field names and their Information types:

Field Name	Information Type
Office	Text
Territory	Text
FSE	Text
City	Text
Customer Name	Text
Customer Code	Text
Distributor	Text
Distributor Referral Number	Text

When you enter text fields, you can simply press Return twice. This is a shortcut that tells File you want the default information type (text).

These fields will provide general information about each field service engineer (FSE) and give information Chips, Inc. needs about the client. The customer code identifies the division of the customer's company the FSE is working with. The Distributor field contains the name of the distributor serving the customer and the Distributor Referral Number field contains a code that gives the distributor's discount rate. (Chips, Inc. gives different discount rates to different distributors, depending on their volume of business). If a distributor refers a new customer to Chips, the distributor gets a better price on the product that's referred, so Chips needs to know which account to credit. Also, distributors are committed to selling a certain volume of products. Both the Customer Code and the Distributor Referral Number are text rather than number fields because they may contain letters as well as numbers.

The next group of fields you enter contains information about the potential for making a sale.

□ Enter the following fields and their information types:

Information Type
Text
Number
Text
Date

Design Number is the number Chips uses in-house to identify the project. It is a text field because it may contain letters or hyphens. The Probability field is the FSE's estimate of the likelihood Chips, Inc. will make the sale. Probability is a number field that will be formatted as a percent. Possible Volume is the FSE's estimate of how many of the product can be sold. It's a text field because the volume number will be followed by characters: either /yr (for "per year") or

total. Decision By is the date by which the customer has told the FSE a decision will be made about using Chips, Inc.'s products.

The next group of fields contains information about the Chips parts the customer's product will use. All of Chips, Inc.'s products are divided into five broad categories.

□ Enter the following five fields:

Field Name	Information Type
CPU/Memory	Text
Application Specific	Text
Systems	Text
High Tech	Text
Support Products	Text

These fields are all formatted as text fields because they may contain any combination of characters and numbers. The field CPU/Memory is for the type of CPU (Central Processing Unit) and memory chips the customer uses; the Application Specific field is the place to record the Chips, Inc. parts that are designed for a specific application (such as fiber optics); the Systems field records Chips, Inc.'s system parts; the High Tech field is for Chips, Inc.'s latest developments; and the Support Systems field is for parts such as peripherals that are also manufactured by Chips, Inc. The names of these fields and the information recorded in them is fairly technical, because Chips, Inc. is, after all, an electronics company. However, the same principles for tracking customers' needs apply regardless of whether the product is dog food, baby shoes, breakfast cereal, or electronics.

The last three fields will contain notes and remarks about the process and information on the outcome of the FSE's work: win (Chips, Inc. products will be used), lose (Chips, Inc. components won't be used), or gone (the project is being discontinued).

□ Enter this information for the last three fields:

Field Name	Information Type
Outcome	Text
Notes	Text
Remarks	Text

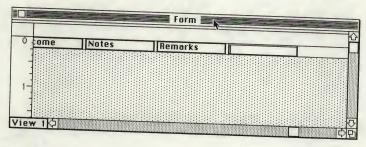
The Notes field will contain a detailed description of the customer's product and the Remarks field is for comments that could help other FSEs in providing sales support on other projects.

## Designing the non-List Helper form

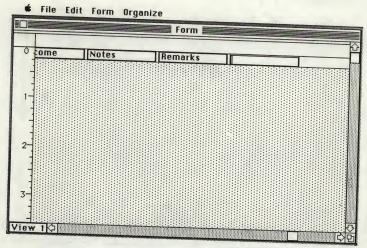
Now that you've entered field names and their information types, you need to arrange the fields and add labels so your screen form resembles the paper form the FSEs are used to working with. Non-List Helper forms let you size and move fields more freely than List Helper forms do.

Since the default length of the form window is only about 2 inches, you need to expand its size so you can view a larger portion of the form. To do this:

 $\hfill\Box$  Position the mouse pointer anywhere in the form window title bar.

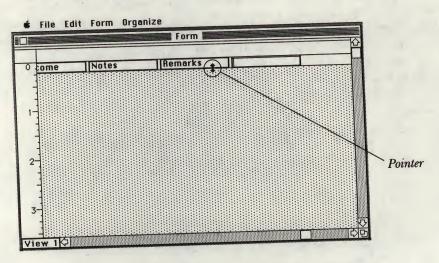


□ Double-click, and the form window expands to fill the entire screen.

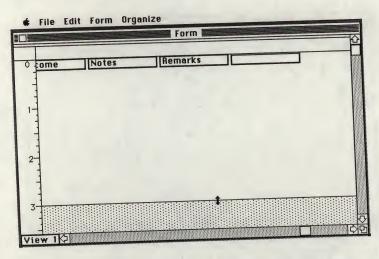


Expanding the visible area of the form to 5 inches (the length we want the form to be) is a two-step process; the farthest you can drag the hide area down in the window now is about 3¾ inches.

 Position the mouse pointer anywhere along the top of the hide area, so that the mouse pointer takes on this shape:



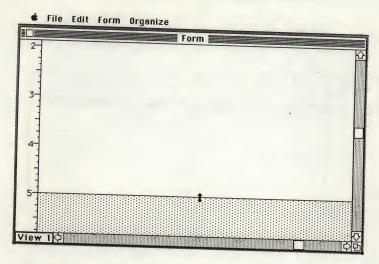
□ Drag the hide area down to approximately the 3" mark on the ruler and release the mouse button.



□ Scroll the form window vertically until the 5" mark of the ruler on the left side of the form window is visible.

Notice that File has expanded the length of the form window to about 3 inches. If you want longer forms, it is necessary to go through this process of scrolling the form window down, then dragging the hide area down more than once.

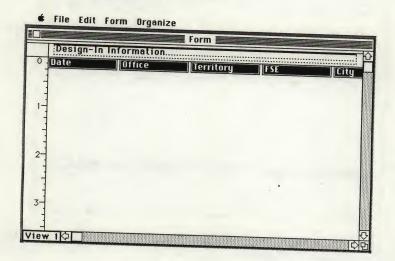
 $\ \square$  Position the mouse pointer on the top of the hide area again, and drag it down to the 5'' mark and release the mouse button.



Now drag the vertical scroll box to the top of the vertical scroll bar and drag the horizontal scroll box all the way to the left of the horizontal scroll bar, and you're ready to begin designing your form.

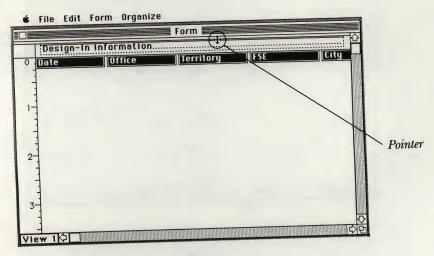
Select all the fields and drag them down to just above the hide area, clearing a nice workspace to design the form. That way you won't have to worry about putting one field on top of another and having to do multiple moves to uncover buried fields.

□ Choose Select All from the Edit menu.



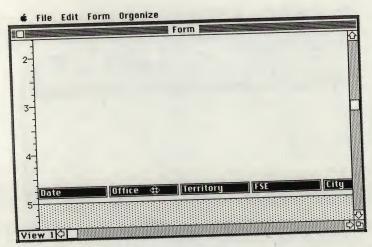
You don't want to move the heading with the rest of the fields, so you have to deselect it first.

Hold down the Shift key and click on the narrow bar at the top of the heading field to "deselect" the heading.



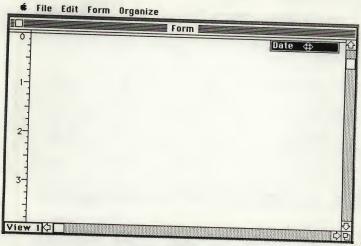
Notice that the bar at the top is no longer dark.

- □ Position the mouse pointer on any one of the selected fields, hold down the mouse button, and drag the fields down to just above the hide area.
- ☐ Release the mouse button.



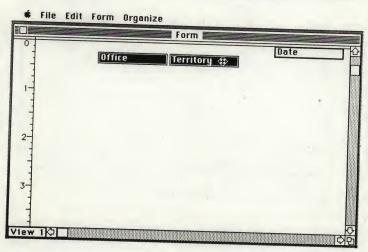
Now position the first group of fields you created (the FSE and customer information fields) and add labels.

- □ Click anywhere in the blank area of the form to "deselect" all the fields.
- □ Position the pointer on the Date field.
- □ Hold down the mouse button and drag the Date field up to the upper right corner of the form window.
- ☐ Release the mouse button.

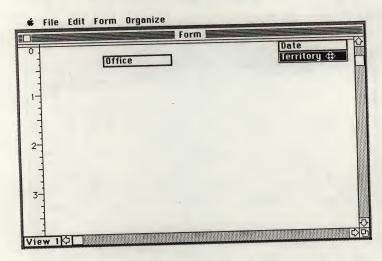


Next, select the Office and Territory fields and drag them to the top of the form window.

- □ Scroll the form window down, then click on the Office field to select it. Hold down the Shift key and click on the Territory field.
- □ Hold down the mouse button and drag the Office and Territory fields to the top of the form window, then release the mouse button.

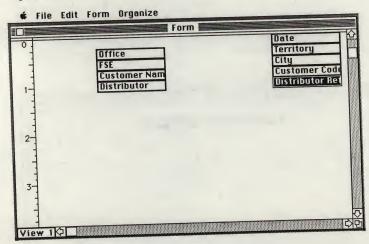


- □ Click anywhere in the form window outside of the selected fields to "deselect" these fields.
- Drag the Territory field to the right until its left edge is aligned with the left edge of the Date field.



☐ Follow these steps to position the rest of the fields in this group (FSE, City, Customer Name, Customer Code, Distributor, and Distributor Referral Number).

At this point your form should look like this:

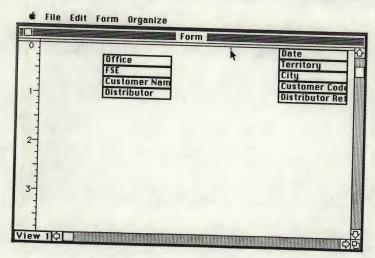


Now you need to add labels. In a non-List Helper form, there is no way to identify the kind of information that appears in each field in the datafile window. So File allows you to create labels that you can position near your fields to

identify them. You can use a label to identify each field in the Design-In form, so you need to put one close to each field. That way when you enter information in the datafile window, you'll know exactly what information belongs in each field.

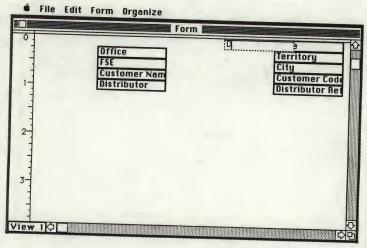
To add labels for this group of fields:

□ Click an insertion point about one inch to the left of the Date field.

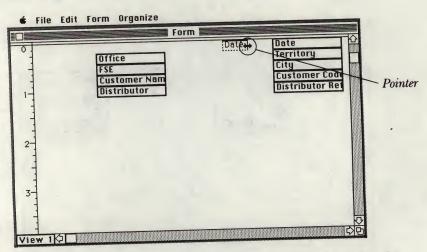


□ Type Date: for the label text.

As soon as you begin to type, File displays a label box.

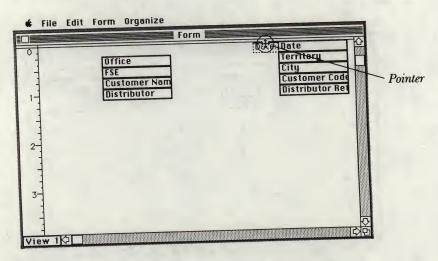


If your label box overlaps into the Date field, shorten it by positioning the mouse pointer on the right edge of the box and dragging its right edge to the left until it looks like this:



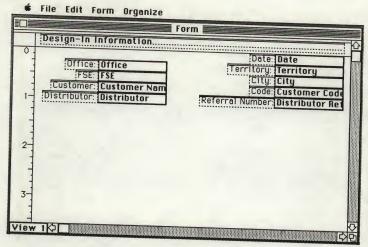
You can move a label box much the same as you move a field. The difference between a label box and a field is that when a label box is selected, only the bar at the top darkens.

☐ Move the Date label up next to the Date field.



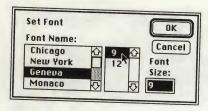
□ Add labels for the rest of your fields in the same way you added the Date label. Click outside of the field where you want the label to appear, type the text for the label, and size the label box to fit the text by dragging its right edge. Then position the label box exactly where you want it.

When you're finished creating and positioning labels for the first group of fields, your form should look like this:



Now you can make some formatting changes to the labels you've just created. Select all the labels, change the font size of the text, and format the text to be boldface and italic.

- Click on the small bar at the top of the Office label box to select it. Hold down the Shift key and click on the rest of the label boxes.
- □ When all the label boxes are selected, choose the Set Font... command from the Form menu.
- □ When the dialog box appears, click on the 9 to change the font size from the default (12-point) to 9-point.



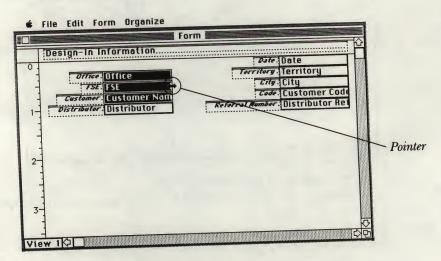
You can keep the Geneva font.

- □ Click the OK button to carry out the font change.
- □ Choose Format Text... from the Form menu.
- □ When the dialog box appears, click the Bold and Italic boxes in the Style list box. In the Align list box, click the Right button to change the alignment from the default (left alignment) to right alignment. Then click OK.

Changing the format of the labels like this gives them a bit more distinction.

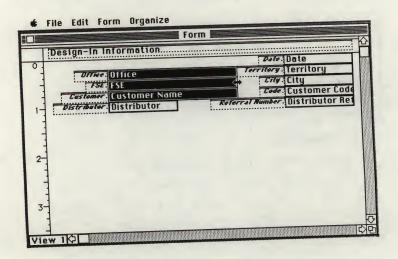
Next, lengthen the fields (not the labels) in the left column, remove the borders (the default display option), and underline them.

- □ Select the Office field by clicking on it. Then hold down the Shift key and click on the FSE and Customer Name fields to select them.
- □ Position the mouse pointer on the right edge of the selected fields.
- □ When the pointer looks like this:



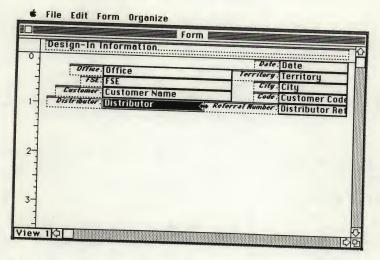
drag the fields to the right until the right edge of the Office field touches the left edge of the Territory label.

□ Release the mouse button.

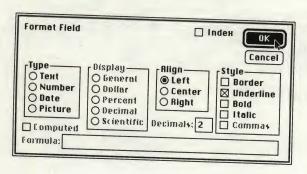


Move the pointer to the right edge of the Distributor field and drag the right edge to the right until it touches the left edge of the Referral Number label.

Your form should look like this:



- □ Next, select all the fields (not the labels) by holding down the Shift key and clicking on each one.
- □ Choose the Format Field... command from the Form menu.
- □ When the dialog box appears, click the Border box in the Style list box to remove the X, which tells File to remove the borders. Click the Underline box to have the fields underlined rather than surrounded with a border. Click the OK button.

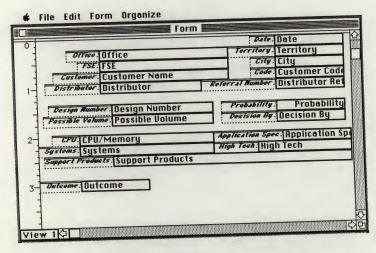


Next, follow these same steps to position and size the next group of fields in your form just as you did the first group of fields. The following fields are the next group:

Design Number
Possible Volume
CPU/Memory
Systems
Support Products
Probability
Decision By
Application Specific
High Tech
Outcome

To help you remember the procedure to follow, the following is a summary of the steps:

- First, move the fields to their proper positions.
- Then add the labels. You won't need to change the font size for the new labels. File keeps the previous label font until you instruct it differently. But you will need to select the labels and format them for boldface and italic.
- Next, size the fields so they look like this:



 Select all your new fields, choose the Format Field... command, delete the borders, and add underlining.

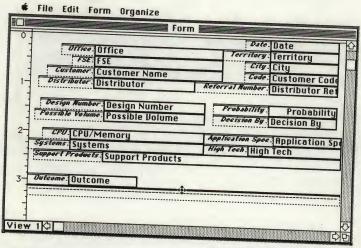
One field (Probability) needs to be formatted for Percent display.

- $\hfill\Box$  Click anywhere in the form window to deselect the selected fields.
- □ Double-click on the Percent field, click the Percent button in the Display list box, double-click in the Decimals typing field and type 0, click the left button in the Align box, then click OK.

Next, add a label filled with dashes and position it above the Notes field to separate the Notes and Remarks fields from the rest of the form.

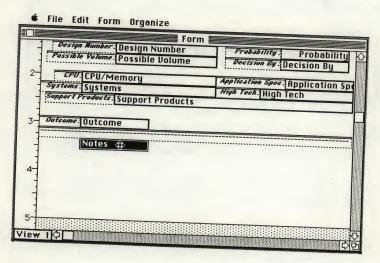
□ Click anywhere at the left edge of the hide area and type five or six dashes. Then, expand the label box that appears as you start to type by dragging its right edge until it's as wide as the screen. Click an insertion point in the box and add more dashes to fill the box. Position this label just below the Outcome field.

Your form will look like this:

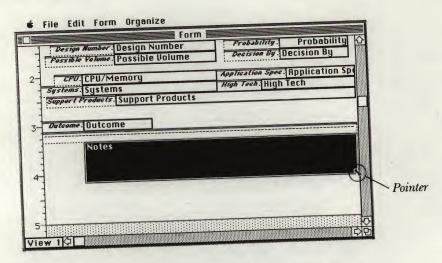


Now add the last two fields.

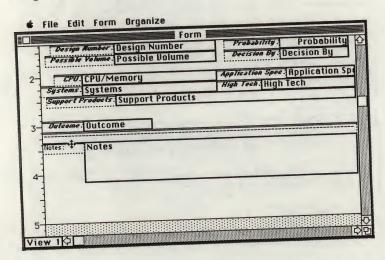
Drag the Notes field up from the hide area and position it just below the label containing the dashes so it lines up with the Outcome field.



 Drag the lower right corner of the Notes field down and over to the right.

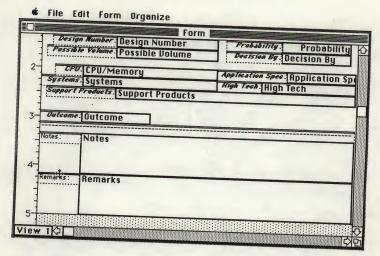


- □ Click an insertion point for a label to the left of the Notes field.
- □ Type *Notes:* as the label text.
- ☐ Drag the label box until it's positioned like this:



- Drag the Remarks field up from the hide area. Position it just below the Notes field and expand it the same way you expanded the Notes field earlier.
- □ Click an insertion point to the left of the Remarks field and type *Remarks*: as the label text.

☐ Size and position the label box so it looks like this:



- Select the Notes and Remarks labels by holding down the Shift key and clicking in the selection bars at the tops of the label boxes.
- □ Choose Format Text... from the Form menu and click the Bold and Italic boxes in the Style list box, then the Right button in the Align box. Then click OK.
- Click in the Notes field, hold down the Shift key, and click in the Remarks field.
- □ Choose Format Field... from the Form menu.
- Click the Border box in the Style list box to remove the check mark, which specifies no border, then click the OK button.
- □ With the Notes and Remarks fields still selected, choose Set Font... from the Form menu.
- □ Click on 9 to change the font size of these fields to 9-point, then click OK.

Your completed form will look like the form already shown in Figure 9-3.

□ While the form window is still open, choose the Save Form As... command from the File menu. Name your form Design-In Form, then press Return.

# **Adding Sales Support Information**

The next step is for Diana's FSEs to use the Mac and add Design-In information to the Sales Support datafile. To give you an idea of how the FSEs at Chips, Inc. use this datafile, Figure 9-4 shows a printout of sample records for the FSEs in Diana's group for the week of May 22, 1985. The FSEs at Chips, Inc. average between 5 and 20 customers a month, so these records are fairly typical.

Figure 9-4. A printout of four records from a sample Sales Support datafile

Design-in information	Date: May 25, 1985
Office: Bellevue, WA	Territory: Western
FSE: Rolph Hodgekiss	City Edmonds
a d AlabaTol	Code: WBL-ATL-01
Distributor: Wonder Supply Refer	ral Mumber: 885-019
	- 4 4 15 14 FA
	Probability: 50%
Possible Volume: 125,000	Decision By: May 25, 1985
40	Fication Spec: SLIC/SAM/FIBE
LPU: (109000	ph Tech: C14623,C14624
Support Products: Bus and Com Drivers	
Motes: Three-line home-telephone exchange. The sing spec is right for their low-end application and features we offer is enticing to them.	
Remarks: Creating a low-cost application requires aggre our set of features meshes with theirs. Packa hardware is a definite plus.	estive pricing and a strong room.

	Design-In Information	
2	Office: Bellevue, WA Ferritory: Western	
	res: Pot a Tandamere City: Tulalip	
	Contract Modical Scan Images Code: WBL-MSI-04	
	Distributor: Netronics Referral Number: B85-006	
	Probability: 90%	
	Design Number: 85-1151-04-1	
	Possible Volume: 500	
	CPU: C18965,C165020 Application Spec:	
	Systems: M-5631 Chassis and Disk High Tech:	
	Support Products:	
	Outcome: Win [win, lose, gone]	
	Wefes: CPU to control their new scanner and to post process-image data.	
	Remarks: Good fit; currently using 65010 in existing system; want to try offloading other processor in system.	
L		

Design-in information	
Office: Bellevue, WA  FSE: Relph Hodgekiss  Costomer: Red Wing Products  Distributor: Wonder Supply  Design Number: 85-RWP-07-6  Possible Volume: 5000  CPU: C165008,C165020  Systems: M-5631 Chassis and Disk  Support Products: 69501	Pate: May 26, 1985 Territory: Western City: Edmonds Code: WBL-RWP-07 Referral Number: BB4-012 Probability: 70% Decision By: Jun 27, 1986 Application Spec: Fiber Optic Migh Tech: Power Diodes
Outcome: Win [win, lose, gone]	×
Mofes: Automated water knife (outs uniform fish whisper board. Dual-ported RAM signiff their camera. Fiber-optic interface essentially. The lead engineer on the project was on whisper board's internation.	ntial.  perned about the interrupt latency and the Lending him an M-series chassis with a

continued

4	Design-in information	
7	Office Della	Date: May 25, 1985
	Office: Bellevue, WA	Territory: Western
	FSE: Rolph Hodgekiss	City: Edmonds
	Costomer: PowerQuick	Code: WRI -POK-20
	Distributor: Netronics	Referral Number: A85-009
	Annies War de la la la la la la la la la la la la la	H03 009
	Design Munder: 85-PQK-20-2	Probability: 20%
- 1	Possible Volume: 20,000	Decision By: Jul 15, 1985
	CPV:	
- 1	Systems:	Application Spec: F-25 power
- 1		High Tech:
	Separt Products: P-25 series power rec	ulators
	Outcome: 1058 [win, lose, gone]	
	Motes: Their new high-speed power-switching de	cinn challange H
		of the F seri
1	Samanher W. L	
1.	Remarks: We have been working with Jim Haynor fro problems with the outoff frequency on using	om the Des Moines factory in uncovering
	must be attended to with the requency on usin	om the Des Moines factory in uncovering og the F-25 series. The capacitance-loading ople attempting a design with this part wi

☐ Type in the records in the sample datafile as shown in Figure 9-5 or type in records for your own business.

Your own information will be unique to your industry. So, you'll probably want to customize both the form and the type of information you store to meet the needs of your department and your company.

# **Creating Useful Reports with the Sales Support Datafile**

Now it's time to create reports with the Design-In information—to group the information into different formats so that whoever reads the information will learn as much as possible from it.

### The product line Design-In report

The Product Line Design-In report, shown in Figure 9-5, displays the four product categories: CPU, Application Specific, Systems, and High Tech, and shows which customers are using which products.

Figure 9-5. A Product Line Design-In report

		Product Line Design-Ins	
CPU/Memory	Application Specific	Systems	
C165008,C165020 C165010,C165020 C165020 C189068 C18965,C165020 C189HC05 C189HC05 C189HC05	F-25 power Fiber Optic SLIC/SAM/FIBER	M-5631 Chassis and Disk M-5690 Chassis & 120Meg Disk M-5690 M-5631 Chassis and Disk M-5631 Chassis and Disk	

High Tech	Customer Name	
High rech	PowerQuick	
Power Diodes	Red Wing Products Navigation Industries	
Mil Spec Bus	Logiference	
C14623,C14624	AlphaTel Medical Scan Images	
	Fun Time Enterprises	
C165HC64L20	Medical Scan Images Medgardian	

Diana and Charlie find this report particularly useful in comparing the different product lines with the customers who use each line to see which types of customers are "designing in" which products. This comparison tells Diana and

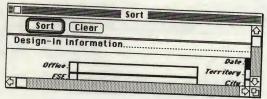
Charlie whether Chips' products are actually being used the way they anticipated they would be used, whether their marketing is on target, and whether there are some new markets they hadn't known about that they can now pursue.

Diana is most interested in how the latest high-tech products are received in the marketplace, because they are the company's prestige products. She can use the product-line report to see which high-tech products are selling well and which aren't meeting the needs of the customers. She can also see which customers make decisions when the product is still a prototype, which tells her those customers who should get Chips, Inc.'s next "sample silicon"—prototype products that FSEs can install in a customer's product to demonstrate the component's features. Diana can analyze the sales of these products to see how many customers who received "sample silicon" actually decided to use the product. If a large number decided against it, she needs to analyze the situation to determine if the problem was the product itself, the pricing, or the support.

File's reports are easy to create. Generally you start by sorting the datafile so the records are in the order you want them in the report. Then you open the report window, drag the fields you don't want into the Not Shown area so they aren't printed, preview the report, and print it.

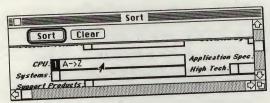
To create the Product Line Design-In report, be sure File and your Sales Support datafile are loaded and running.

☐ Choose the Sort... command from the Organize menu.



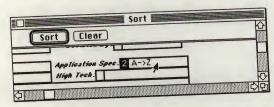
A Sort window appears. In the product-line report, the CPU/Memory field will be the first (or primary) sort, Application Specific will be the second sort, Systems the third sort, and High Tech the fourth sort. Sort order means File will first organize the records by the information in the CPU/Memory field. Then any records that contain the same CPU/Memory information will be organized by the information in Application Specific. If there are any records with the same CPU/Memory and Application Specific information, File will then sort them by Systems. Then if there are any records with the same CPU/Memory, Application Specific, and Systems information, File will sort these by the information in the High Tech field. In a report with this small a datafile, the second, third, and fourth sorts don't make any practical difference. But these additional sort orders do ensure that when we open up the report window, those fields will be in the order we want: CPU first, followed by Application Specific, then Systems, and then High Tech. It's a shortcut to eliminate dragging a lot of fields around in the report window.

☐ Use the vertical scroll bar in the sort window to scroll through the form until you see the CPU label, and click anywhere in the field to the right of it.



You'll see a 1 appear in the small box on the left side of the field, indicating that this field is the first (or primary) sort. In the box next to the sort order, you'll see A->Z, which indicates that the records will be ordered alphabetically from A to Z.

- □ Scroll the sort window to the right until the Application Specific field is visible.
- □ Click in the Application Specific field.



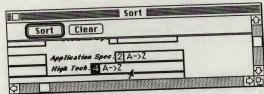
You'll see a 2 appear in the small box on the left side of the field, indicating that this field is the second sort.

- □ Scroll the sort window to the left until the Systems field is visible.
- □ Click in the Systems field.

You'll see a 3 in the box on the left side of the Systems field.

- □ Scroll the sort window to the right until the High Tech field is visible.
- □ Click in the High Tech field.

You'll see a 4 in the box on the left side of the High Tech field.



 $\hfill \square$  Now click the Sort button to carry out the sort.

Now that the records are sorted, open the report window, select and drag the fields you don't want printed into the Not Shown area, and then preview the report on the screen to be sure it has the information you want before printing it on the printer.

 $\hfill\Box$  Choose the Report... command from the Organize menu.

Your report window looks like this:

Sort	Summary Report			
Heading		A->Z	A->Z	
Field	CPU/Memory	lication Spec		System
by High Te	CPU/Memory	Application Sp	Systems	Syste
by System				
by Applica				
by CPU/Me				
Grand				

□ Scroll to the right and notice that the first four fields are in the order you specified with the Sort command. Following these four fields are the rest of the fields in an area called Not Sorted.

Sort	Not Sorted		
Heading	Date	Office	Table
Field	Date	Office	Territory
by High Te			Territory
by Systems			
by Applica			
by CPU/Mer			
Grand			

Select all the fields in the Not Sorted area except Customer Name, the only additional field you want in your report.

Click on the Date field to select it. Then hold down the Shift key and click on the following fields:

Office
Territory
FSE
City
Customer Code
Distributor
Distributor Referral Number
Design Number
Possible Volume
Decision By
Support Products
Outcome
Notes
Remarks

- □ Release the Shift key.
- Hold down the mouse button and drag these fields to the right until the vertical line that appears when you start dragging is in the Not Shown area. Then release the button.
- Scroll the report window back to the left to see that the selected fields are in the Not Shown area.

Preview	☐ Summary	Report	
ort	Not Shown	Office	Territory
eading	Date		Territory
ield	Date	Office	
y High Tec			
y Systems			
bu Applica			
by CPU/Mer	1		
Grand	1		

Next, widen the Application Specific field so the field heading will be visible on the report.

- Position the mouse pointer on the right side of the Applications Specific field in the Field row.
- Hold down the mouse button and drag the right side of the field about half an inch to the right. Release the mouse button.

Previe	<b>□</b> Summary Report		
ort	A->Z	A->Z	A->Z
leading	CPU/Memory	Application Specifi Application Specific	4 Sustams
Field	CPU/Memory	Application Specific	Jugatema
by High Te			
by System	15		
hu Applica	01		
by CPU/M	el		
Grand			

Now you can preview the report.

 $\hfill\Box$  Click the Preview button at the top of the report window.

Your report will have information from your datafile for the four product types and the customers for each product. If this is the information you want, tell File the kind of page layout you want by using the Page Setup... command from the File menu and then print the report.

- □ Click the Done button to end the preview of the report.
- $\hfill\Box$  Choose the Page Setup... command from the File menu.

When you choose Page Setup, the following dialog box appears:

Paper:   Old  Orientation:  Pagination:  Reduction:	<ul><li>Normal pag</li><li>None ○</li><li>Dage when first</li></ul>	O A4 Letter O Internati	ional Fanfold  O Wide s between pages	Cancel
Left Margin: [ Top Margin: [	0.75	1	Margin: 0.75 Margin: 1	

You specify the page layout options you want in the Page Setup dialog box. For the FSE Activity report, you want a page header (text printed at the top of each page of the report) that contains the title of the report. You also want a page footer (text printed at the bottom of each page) containing the number of each page. You can accept File's default page margins (1 inch for the top and bottom, 0.75 inch for each side), but you need to change the default orientation of the printing on the page because the report is too wide to fit across the width of the page with a normal page orientation. The default Orientation option is Tall, which prints in the standard tall, narrow page format. But you need to change the Orientation option to Wide, so that your report will be printed sideways—that is, in a short, wide page format.

To use the Page Setup dialog box for the product-line report:

- □ Click the Wide button in the Orientation row.
- □ Type Product Line Design-Ins in the Page Header typing field as the header.
- Click in the Page Footer typing field for an insertion point and type Page &P to put the word Page followed by the current page number on the bottom of each page of the report.

The &P is a special printing code that File uses to print the current page number. The word Page preceding the code is used to identify the page number.

You can accept File's default margins, so you don't need to do anything with the Margin typing fields.

Your completed dialog box looks like this:

lmageWriter (	Standard o	r Wide)			
Paper:   U	S Letter S Legal omputer Pe O Tall  Normal	oper O Tal pages O 50	I Adjusted  No breaks	⊚ Wide s between pa	Cancel ges
Page Header	Product L	ine Des	ign-Ins		
Page Footer:					
Left Margin:				t Margin: 0.7 m Margin: 1	5

Now all that's left is to print the report.

- $\hfill\Box$  Choose the Print Report... command from the File menu.
- □ When you see the Print dialog box, if you have an ImageWriter printer connected to your Mac and you're using continuous-form paper, accept File's defaults by clicking OK.

Your printed Product Line Design-Ins report should look like the printout already shown in Figure 9-5.

You'll want to save this report so you don't have to create it all over again every time you want to use it.

- □ Choose Save Report As... from the File menu.
- □ When the dialog box appears, type *Product Line Design-Ins Report* as the name of your report, click the Drive button if necessary, to save this report on your data disk, and click the Save button.

You can print this report once a month. It will become increasingly useful as you continue to add information to your Sales Support datafile.

### The FSE Activity report

The FSE Activity report shows the number of calls each FSE has made and the product lines of the customers each works with. Figure 9-6 shows a typical FSE Activity report.

FSEs can use this report to see with which types of customers they experience the most success. Managers can use it for the same purpose, so they can better assign new customers to the FSEs. FSEs and managers can see how each FSE's Probability estimate compares with Outcome. For example, by looking at the Probability fields, you can see that Ralph Hodgekiss predicted a 70 percent

Figure 9-6. A sample FSE Activity report

FSE	Date	Customer Name	FSE Activit
Pete Tandamere	May 22, 1985	Medical Scan Images Medical Scan Images	WBL-MSI-04 WBL-MSI-03
Raiph Hodgekiss	May 23, 1985 May 25, 1985	Fun Time Enterprises PowerQuick AlphaTel	WBL-FTE-08 WBL-PQK-20
Sandy Baldwin	May 26, 1985 May 24, 1985	Red Wing Products Navigation Industries Logiference Medgardian	WBL-ATL-01 WBL-RWP-07 WBL-NVI-02 WBL-IFR-01 WBL-MGN-02

Design Number 85-MSI-04-1	Dutcome	Probability	Decision By	Possible Volume
05-MSI-03-3 05-MSI-03-3 05-PTE-00-3 05-PCK-20-2 05-ATL-01-1 05-RWP-07-6 05-NVI-02-1 05-FR-01-1 05-FR-01-1	win gone lose win win	90% 40% 80% 20% 50% 70% 20% 30% 80%	Jun 19, 1985 Jun 12, 1985 Jul 6, 1985 Jul 15, 1985 May 25, 1985 Jun 27, 1986 Sep 20, 1985 Jul 30, 1985 Jun 20, 1985	500 1000 40,000 20,000 125,000 5000 8000 200 60,000

probability that Chips, Inc. would get Red Wing Products' business and by looking at the Outcome fields you can see that Red Wing Products was a win (Red Wing Products bought Chips, Inc. products). You can also see that Ralph predicted a 50 percent probability of Chips, Inc. getting AlphaTel and AlphaTel was a win. Ralph predicted a 20 percent probability that Chips, Inc. would get PowerQuick, which turned out to be a lose. So, Ralph's estimates seem on target, based on his predictions in Probability and the results in Outcome.

FSEs and managers can use this report as a sort of tickler file for active accounts. They can check the date in the Decision By column and make sure their clients have all the support they need as the decision date approaches. FSEs, with an average of 5 to 20 new customers a month, may have 40 to 60 active customers at once. Without an automated system that allows them to find all of the customers whose decision dates are at hand, it would be much more difficult for them to keep track of customers.

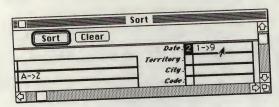
To make the FSE Activity report, first sort the Sales Support datafile in the order needed for this report. Then open a new report window, arrange the fields the way you want them printed, preview the report, and print it, just as you did for the product-line report.

Make sure File is loaded and the Sales Support datafile is open before you start creating the FSE Activity report.

- □ Choose the Sort... command from the Organize menu.
- □ Click the Clear button to clear the criteria for the previous sort.

The two items you need to sort for this report are FSE and Date.

- □ Scroll the sort window left, then up until the FSE field is visible.
- □ Click anywhere in the FSE field to make it the primary sort.
- □ Scroll the sort window horizontally to the right until the Date field is visible.
- □ Click in the Date field to make it the secondary sort.



□ Click the Sort button.

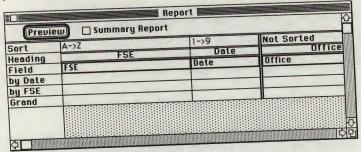
File sorts the records in the order you specified.

☐ If the report window isn't already open, choose the Report... command from the Organize menu.

The Report window will open with the first report (Product Line Design-Ins) still displayed.

□ Choose New Report from the File menu.

Now your report window displays the fields you just sorted in the Sort area.



Next, you need to select the fields you don't want printed in the report and drag them into the Not Shown area.

□ Hold down the Shift key and click on the following fields:

Office
Territory
City
Distributor
Distributor Referral Number
CPU/Memory
Application Specific
Systems
High Tech
Support Products
Notes
Remarks

- □ Release the Shift key.
- $\hfill\Box$  Hold down the mouse button and drag these selected fields to the right into the Not Shown area.

Next, rearrange the fields in the Not Sorted area into the order in which you want them printed.

- □ Scroll the report window to the left until the Outcome field is visible.
- $\hfill\Box$  Select the Outcome field in the Field row and drag it left.

As you drag the Outcome field, you can see a vertical line in the report window that indicates where the field will be inserted.

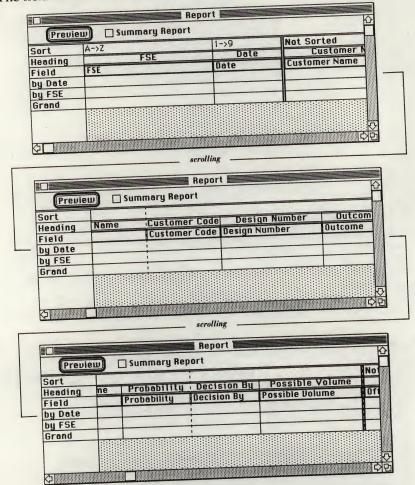
Drag the Outcome field left until the vertical line is on the left edge of the Probability field and release the mouse button.

by Date Butcome	babili
by Date Butcome	nanili
	robabi
by FSE	
Grand	

□ Select the Possible Volume field and drag it to the right until the vertical bar is on the right edge of the Decision By field. Release the mouse button.

□ Widen the Customer Code field slightly so that all of the field headings will be visible on the report.

The fields in the Not Sorted area should now be in this order:



The order of the fields is an important consideration in designing reports. You want to be able to quickly grasp what is most important, and one way to do that is with the order in which the fields are displayed. In the FSE Activity report, it's important to have Outcome, Probability, Decision By, and Possible Volume side by side, because the information in these fields for a particular customer and FSE is exactly what the person reading the report needs to grasp—what was the outcome of the FSE's work with a client and how crucial was

Chips, Inc.'s win or loss, and, for active jobs, when will the decision be made, what kind of probability of success does Chips, Inc. have, and how big is the job. Now the report is all set up and ready to preview.

☐ Click the Preview button at the top of the report window.

If everything looks the way you want it, the next step is to set up the page layout and then print the report.

- □ Click the Done button to end previewing the report.
- $\hfill\Box$  Choose the Page Setup... command from the File menu.

Because this report is too wide to fit horizontally on one page, you need to change the Orientation option.

☐ Click the Wide button in the Orientation row to have the report printed sideways on the page.

To identify the report easily, you can have the report title printed at the top of each page.

□ Type FSE Activity - May 1985 in the Page Header typing field as the

Leave the numbers in the Margin typing fields unchanged in order to accept File's default margins.

□ Click the OK button.

File will store this page setup with the FSE Activity report when you save it. The next time you print this report, you won't need to use the Page Setup... command unless you want to change the settings.

- □ To print, choose the Print Report... command from the File menu.
- □ Be sure your printer is ready. If you have an ImageWriter and continuous-form paper, accept File's defaults in the Print dialog box by clicking the OK button.

Your finished report will look like the report already shown in Figure 9-6.

This sample report shows only one week's activity, so it may not look worthwhile. But, when there's more data in the Sales Support datafile and similar reports are run on a monthly basis, you'll find them quite useful.

Before you start the next report, while the report window is still open, save the FSE Activity report.

- □ Choose the Save Report As... command from the File menu.
- □ When the dialog box appears, type FSE Activity Report as the name of the report.
- ☐ If necessary, click the Drive button to make sure the report is saved on your data disk, then click the Save button.

### **FSE Notes and Remarks report**

This is the report Diana and Charlie agreed to share that lists FSE comments about the usefulness of Chips, Inc. products.

The Notes field provides details about the types of applications for which customers are using Chips, Inc. products. This is the information Charlie agreed to send on to the manufacturing department. The manufacturing department can make use of the FSE notes to see how well Chips, Inc. products are hitting the target markets.

The Remarks field details the FSE's experience with using Chips, Inc. components for the customer's project. The Information in Remarks details how well a Chips product fits the customer's project, what was done or needs to be done to get the sale, and it indicates, if the customer was lost or the project was discontinued, what should have been done. This is the place for FSEs to analyze their success or failure with customers and share this experience with other FSEs. FSEs can use this information to gain insight into working with similar customers, products, or projects.

A sample FSE Notes and Remarks printout is shown in Figure 9-7.

Figure 9-7. A printout of a sample FSE Notes and Remarks report

FSE	Date	Customer Name	
Pete Tandamere	May 22, 1985	Medical Scan Images	
		Medical Scan Images	
	May 23, 1985	Fun Time Enterprises	
Ralph Hodgekiss	May 25, 1985	AlphaTel	
		PowerQuick	
	May 26, 1985	Red Wing Products	
Sandy Baldwin	May 24, 1985	Medgardian	
		Logiference	
		Navigation Industries	

# FSE Notes and Remarks

### Notes

Looking for CPU/Memory combination to hold and process images as they are created by their new scan equipment.

CPU to control their new scanner and to post process-image data.

Hand-held bouncing-ball video game for home market is well suited for the 89005. Success with their hand-held Running 500 game has encouraged them to try the

Three-line home-telephone exchange. The single-ohip solutions we offer look good. The spec is right for their low-end application and the hardware/software support of features we offer is enticing to them.

Their new high-speed power-switching design challenges the capability of the F series.

Automated water knife (outs uniform fish portions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysis of fish passing their camera. Fiber-optic interface essential.

AutoDialer, I/O, A/D and ROM/RAM application uses all features of 89C705.
Vatoridog timer important to guaranteeing reliability of their product. VIII use 89C51
to gain extra I/O pins.

Dispositio tool for aircraft maintenance, captures and analyzes X-rays of high-stress aircraft parts to determine life span and proper maintenance action. Device must be portable. Contains multiple processors.

Chart and map display for use in shoreline and fishing nevigation system. Need ruggedized disk and enclosure. Or aphic hardware/software needed. Also interface to many different serial interfaces.

continued

## Remarks

Looking for package and they are uncertain of configuration.

Good fit; currently using 65010 in existing system; want to try offloading other processor in system.

There is concern with the 69COS's ability to interface with their custom LCD driver. Jim Thompson from the EI Sepasso factory acknowledges that although the driver-current spec is low, it may be marginal for this application.

Creating a low-cost application requires aggressive pricing and a strong look at how our set of features meshes with theirs. Packaging a software skeleton with the hardware is a definite plus.

Ye have been working with Jim Haynor from the Des Moines factory in uncovering problems with the outoff frequency on using the F-25 series. The capacitance-loading must be attended to with this part. Most people attempting a design with this part will

have similar concerns.

The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction with the bus. Lending him an https://eschassis.with a 100-meg disk drive gave him and his people a chance to see it would work 'for sure' and was very inflaential in getting this one.

Low-power shewcase. Some concerns on stepped-volume pricing.

Interface to X-ray device of concern. Also, overall system perfomance is a major

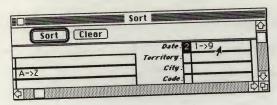
Prefer components with single-vendor support of software. Design still in transition.

This report has only five fields and is simple to create. Be sure File is loaded and the Sales Support datafile is open.

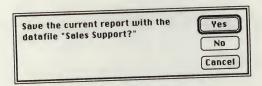
- □ Choose the Sort... command from the Organize menu.
- □ When the sort window appears, click the Clear button to clear the previous sort criteria.

Just as with the first two reports, you specify the sort order by the order in which you select the fields you want sorted.

Click in the FSE field to make it your primary sort and then in Date to make Date your secondary sort.



- □ Click the Sort button.
- □ Choose New Report from the File menu.
- ☐ File asks if you want to save the current report that appears in the report window with the Sales Support datafile.



□ Click the No button since you've already saved it separately under its own name.

Your report window changes to reflect your latest sort.

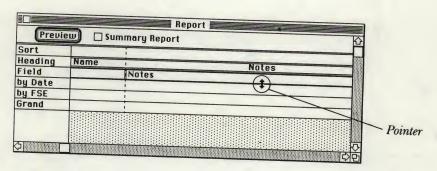
- Hold down the Shift key and click on all the fields in the Not Sorted area except Customer Name, Notes, and Remarks. Then release the Shift key.
- □ Drag the selected fields to the right until the vertical line that appears when you begin to drag is in the Not Shown area, and then release the mouse button.
- $\hfill\Box$  Scroll the report window all the way to the left.

Sort	A->Z	1->9	Not Sorted
Heading	FSE	Date	Customer
Field	FSE	Date	Customer Name
by Date			The traine
by FSE			
Grand			

That's all there is to setting up this report. Now you can preview it so you can see how these long text fields (Notes and Remarks) will look, and, if necessary, make the fields in the report window longer.

In the report in Figure 9-7, notice that File has changed the heights of all the fields back to the default height, allowing only one line of the text in the Notes and Remarks fields to be displayed. File truncates the text and anything that does not fit in this one line is not visible. You need to make all of the fields large enough to accommodate all of the text in these two fields.

- $\hfill\Box$  If necessary, scroll right until the Notes field is visible.
- $\hfill\Box$  Position the mouse pointer on the bottom edge of the Notes field in the report window.
- □ When the pointer looks like this:



drag the field down, then release the mouse button to lengthen it. Start by lengthening it about half an inch.

Cant		ummary Report		
Sort Heading	Name			
Field		Notes	Notes	
y Date		-		
y FSE Frand				

By scrolling the form window to the left, you can see that lengthening the Notes field lengthens the other fields as well.

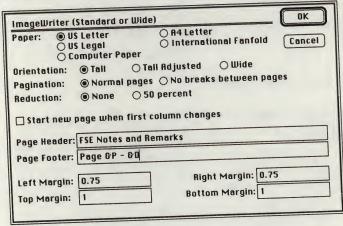
Preview the report to see that you can read all of the Notes text. If you can't read all of the text or if the field is too long, you can adjust the field size using the same steps you used earlier to make the fields the size they are now. Continue using this trial-and-error method to lengthen or shorten the fields until you can see all your text. Then, set up the pages for this report.

□ Choose the Page Setup... command from the File menu.

You'll see a blinking insertion point in the Page Header box.

- □ Type FSE Notes and Remarks as the header text.
- □ Click in the Page Footer box and type *Page &P &D* to include the current page number and the date (from the Macintosh system calendar) as part of the footer.

Leave the Orientation option Tall and accept File's default margins. Your completed dialog box looks like this:



- □ Click the OK button.
- □ Choose the Print Report... command from the File menu. Click the OK button to accept File's defaults in the Print dialog box.

Your printed report will look like the report already shown in Figure 9-7. Diana plans to exchange the information in this report with Charlie each week so that the sheer volume of notes and remarks doesn't become too much of a burden to read.

Save this report so you won't have to re-create it each time.

- $\hfill\Box$  Choose Save Report As... from the File menu.
- □ Type *FSE Notes and Remarks* as the name of the report and click the Save button.

# The monthly Win-Lose-Gone report

The fourth report prints the Outcome, Probability, product category, and Remarks fields for only the records in the datafile for the customers whose outcome is known. The records for active customers who haven't yet made a decision are hidden before the report is printed. A sample Win-Lose-Gone report is shown in Figure 9-8.

Diana and her group use the Win-Lose-Gone report to analyze their products and support. They look at the Outcome fields containing a win to see which features customers are using, and they send this information to the Chips, Inc. factory so that the factory engineers can see which features customers find useful and therefore should not be eliminated if the product is redesigned. They look at the Outcome fields with a loss to try to determine whether the reason Chips, Inc. products weren't used was due to a lack of support or whether it was

Figure 9-8. A sample Win-Lose-Gone report

Outcome	Customer Name			
win	AlphaTel	Probability 50%	CPU/Memory C189068	Application Specific SLIC/SAM/FIBER
	Medical Scan Images	90%	C18965,C165020	
	Red Wing Products	70%	C165008,C165020	Fiber Optic
ose	PowerQuick	20%		F-25 power
one	Fun Time Enterprises	80%	C189HC05	

Systems

High Tech

C14623,C14624

Creating a low-cost application requires aggressive pricing and a strong lock at how our set of features meshes with theirs. Packaging a software skeleton with the hardware is a definite plus.

Doed fit; our rently using 65010 in existing system; want to try officading other processor in system.

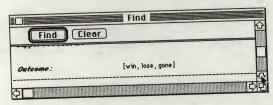
The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction with the bus. Lending him an interrupt latency and the whisper board's interaction with the bus. Lending him an interrupt latency and the whisper board's interaction with the bus. Lending him an interrupt latency and the whisper board's interaction with the bus. Lending him an interrupt latency and the whisper board's interaction with the bus. Lending him an interrupt latency and the whisper board's interaction with the people a chance to see it would work for sure. We have been working with Jim Haynor from the Des Holmes factory in uncovering problems with the outerfit frequency on using the F-25 series. The capecitance-loading must be attended to with the economy with the economy with the economy latency and estign with spart will have similar concerns.

There is concern with the e9005's ability to interface with their outen LCD driver. Jim Thompson from the El Sepasso factory acknowledges that although the drive-ourrent spec is low, it may be marginal for this application.

due to a bad product fit. They look at the Outcome fields with a gone to see which are their serious customers and which may not warrant as much attention. They also check to be sure the projects with a gone in the Outcome field are really discontinued (gone), and not completed without Chips, Inc. parts (loss).

This report is straightforward to create and, except for first hiding all active customer records, it is set up exactly like the previous three reports. After hiding the records for active customers, you'll sort the datafile, open the report window, then drag fields you don't want printed into the Not Shown area. Next you'll lengthen the fields in the report so the text in the Remarks field is visible when the report is printed, preview the report, and then print it.

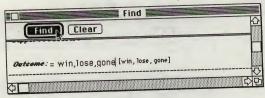
- □ Click anywhere in the datafile window to make it active.
- □ Choose the Find... command from the Organize menu.
- □ Click the Clear button to clear any previous search criteria.
- ☐ When the find window appears, click on the down arrow at the bottom of the vertical scroll bar to scroll down to the Outcome field.



The down arrow allows you to scroll down one line at a time, so it's easier to use than the scroll box when you want to find a particular piece of information in a small window.

To find only those records with win, lose, or gone in the Outcome field, you can use the = special search code (which tells File to match what you type after the code) and the three field entries you want File to find, separated by commas.

- □ Click for an insertion point in the box to the right of the Outcome label and type = win,lose,gone as the search criteria.
- □ Click the Find button.



Now File hides the records of all your active accounts—that is, the accounts for which there is no outcome yet—and displays only those records for which there is an outcome. If you scroll through the datafile, you'll find only those with win, lose, or gone in the Outcome field.

Next, sort the datafile.

- □ Choose the Sort... command from the Organize menu. In the sort window, click the Clear button to remove any previous sort criteria.
- ☐ Use the vertical and horizontal scroll arrows just as you did with the Find command to scroll until the Outcome field is visible, then click in the Outcome field.

You can see A->Z in the large box on the right side of the Outcome field, which indicates that File will sort this field alphabetically. You can also see a 1 in the small box on the left side of the Outcome field, which tells you this field is the first sort.

□ Click one more time in the Outcome field.

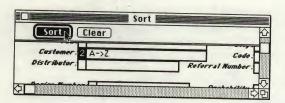


The A->Z changes to Z->A, indicating that the sort will be in reverse alphabetical order, which will put the records containing the word win at the top of the report.

 $\hfill\Box$  Scroll up until the Customer Name field is visible and click in it.

The number 2 appears in the small box on the left side of the Customer Name field, indicating this field is your second sort.

□ Click the Sort button.



The records File just found are sorted in reverse alphabetical order by Outcome, then alphabetically by Customer Name.

- $\hfill\Box$  Choose Report... from the Organize menu.
- □ Choose New Report from the File menu.

You'll see a dialog box asking if you want to save the current report with the Sales Support datafile.

□ Click the No button, since you've already saved the report separately under its own name.

File then displays a new report window using the sort criteria just specified.

Heading Outcome Customer Name Date Field Outcome Customer Name Date O by Custome by Outcome	Sort	IZ->A	A->Z	Not Sorte	d
Field Outcome Customer Name Date 0 by Custome by Outcome				Date	-
by Custome by Outcome			Customer Name	Date	0
by Outcome	by Custon	16			!
Grand	by Outcom	16			-
	Grand			<u> </u>	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1

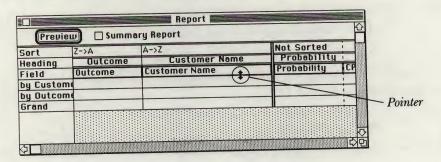
□ Select the following fields by holding down the Shift key and clicking in each one, then releasing the Shift key and dragging them into the Not Shown area:

Date
Office
Territory
FSE
City
Customer Code
Distributor
Distributor Referral Number
Design Number
Possible Volume
Decision By
Support Products
Notes

These are the fields you don't need in this report.

The fields are in the order in which you want them displayed in the report, so you don't need to do any rearranging. But you will need to widen the fields so all the text in the Remarks field is printed.

- $\hfill\Box$  Scroll the report window all the way to the left.
- ☐ Move the mouse pointer to the bottom line of any field in the report window. When the mouse pointer looks like this:



drag the bottom line down about half an inch and release the mouse button.

Previe		ary Report	
Sort	Z->A	A->Z	Not Sorted
Heading	Outcome	Customer Name	Probability :
Field	Outcome	Customer Name	Probability C
by Custom		1	
by Outcom			
Grand			

- $\hfill\Box$  Widen the Application Specific field so that the field heading will be visible on the report.
- □ Now click the Preview button.

When the report is displayed on the screen, check to be sure that the entire Remarks text is visible. If all appears well, you can set up your page and print the report.

- □ Click the Done button to end previewing the report.
- $\hfill\Box$  Choose the Page Setup... command from the File menu.

If you use the wide orientation to print this report sideways on the page and change the left and right margins to zero, the information will fit exactly on two pages. You can also type a page header and footer.

- ☐ In the Page Setup dialog box, click the Wide button in the Orientation row.
- □ In the Page Header typing field, type &LWin-Lose-Gone Report as a header.

The &L is a code that tells File to left-align the header text. That way, if the report is more than one page long, the header will appear on the first page of the report.

- □ Click to get an insertion point in the Page Footer typing field and type &LMay 1985 (or the current month and year) as a footer.
- $\hfill\Box$  Double-click in the Left Margin typing field and type  $\theta$  as the left margin.
- $\hfill\Box$  Double-click in the Right Margin typing field and type  $\theta$  as the right margin.

☐ Your completed Page Setup dialog box should look like this:

Ö	IS Letter IS Legal Computer Pa	○ R4 Letter ○ International Fanf aper	old Cancel
Orientation: Pagination: Reduction:	None	○ Tall Adjusted ® Wide pages ○ No breaks between ○ 50 percent first column changes	n pages
□ statt nem	3		
		se-Gone Report	
	&LWin-Lo	se-Gone Report	

- □ Click OK.
- □ Choose the Print Report... command from the File menu and click the OK button in the dialog box.

Your printed report will look like the report shown in Figure 9-8. That's all there is to setting up the last report. Save it on disk so you can use it each month.

□ Choose the Save Report As... command from the File menu. Type *Win-Lose-Gone Report* as the name of your report and click Save.

After making these four reports you can see that designing reports is fairly straightforward. After you've used these reports for several months, you may wish to redesign them (for example, arrange fields in different combinations or orders). Just follow the basic steps of sorting the datafile, opening a new report window, arranging the fields in the window the way you want them in your report, and then previewing and printing. Any time you want to make changes to a report, be sure to save the new version of the report with the Save Report command from the File menu.

# **Getting Mainframe Information**

The next step is to connect the Mac to an information service so that you can get the sales reports from the company mainframe electronically instead of on paper. We'll set up our Mac for communications, dial the information service, download the information to the Mac, and then use the information in the report in File. That way you'll have the information in a format you're used to working with, and you can get up-to-date information at any time. You can use File to sort the information in an order that matches the Sales Support datafile so that you can compare figures quickly and easily.

# The Hardware and Software Connection

To connect to an information service, you'll need a modem and communications software for your Mac. For our example, we'll use a 1200-baud Hayes autodial modem. (Baud, or baud rate, is a measurement of communication speed) An Apple 1200-baud modem or Hayes-compatible modem will work the same way.

For your Mac communications software, you can use any commercial or public domain package. MacTerminal and VersaTerm are two popular commercial packages. Using any of these packages and a modem, you should be able to link your Mac to an information service. Our example uses MacTerminal.

# Preparing to connect

Before Diana makes the hardware and software connections, she needs to make an in-house human connection with the company MIS manager, the person in charge of the company mainframe and the reports it produces. Diana has decided to meet with the MIS manager and convince him to put weekly sales status reports from the company mainframe into Diana's CompuServe electronic mailbox. To do this, the MIS manager first has to convert the report file into a format that can be transmitted over a modem and then be understood by Diana's Mac when she retrieves, or downloads, the information later. This format, called ASCII (American Standard Code for Information Interchange) or text-only, is the most common format for data communications. In this case, however, he must also take one extra step to ensure that Diana can load the ASCII information directly into File after she has retrieved it from her electronic mailbox in CompuServe. File requires that each field in a record be separated by a tab character, and that the individual records end with a carriage-return character to separate them. After lunch (paid for from Diana's budget), the MIS manager agrees to produce and send a report that contains information about the customer code, part number, part description, and volume for each item.

Diana can make a datafile with four fields to contain this information, and load in this report every week—a much better system than waiting for the mainframe's monthly paper report.

After connecting with the MIS manager, Diana's next step is to get the Mac and the information service to communicate. In the following section of this chapter, you'll see how to use the Mac to connect to the CompuServe Information Service using a 1200-baud autodial Hayes modem and MacTerminal software. I have chosen this setup as a model, not to show you all the possibilities, but rather to give you a place to start experimenting. It would require more than part of a chapter to teach you all you need to know about telecommunicating with an information service, but this section will give you the basics by showing you one example.

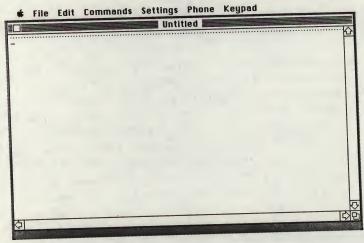
# A text transfer connection

The simplest way to transfer information between the Mac and Compu-Serve is to do what's called straight text transfer. In straight text transfer, the sending computer sends the information character by character, and the receiving computer simply accepts the characters without checking for errors. You'll use the Mac and the modem, and dial up CompuServe to get the new weekly sales report.

- □ Start your Mac, and be sure your modem is plugged into the communications port on the back of your Mac and is turned on.
- □ Double-click on the MacTerminal icon.



When MacTerminal is loaded, you'll see a blank screen with menu choices along the top.



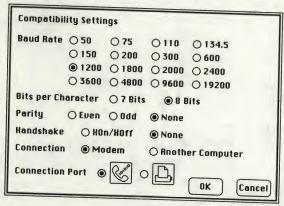
Normally, the next step would be to set up the communications parameters found under the Settings menu so MacTerminal's parameters match Compu-Serve's. However, the parameters CompuServe wants are MacTerminal's defaults, so you can skip these steps and move on to the phone settings.

In case you're using a communications program other than MacTerminal, we'll show you the dialog boxes on the Settings menu, with MacTerminal's defaults indicated, so you can set up your program correctly.

The Terminal... command on the Settings menu shows the different types of terminals the Mac can emulate.

Terminal Settin	gs	
Terminal	®UT100 OTTY	○ IBM 3278
Mode	⊕ RNSI	○ UT52
Cursor Shape	Underline	OBlock
Character Set	United States	O United Kingdom
Line Width	80 Columns	O 132 Columns
Protocol Conv	Offpptetine	O Eluster Cth
⊠ On Line	☐ Local Echo	☐ Status Lights
⊠ Auto Repeat	☐ Auto Wraparound	1 □ New Line
☐ Repeat Ctris	☐ Transparent	OK Cancel

The Compatibility... command is the place you set communications parameters like baud rate and parity.



The File Transfer... command allows you to choose how to send and receive data.

Transfer Method	○ HModem	® Text	
		•	
	○ MacTerminal	Other	
Delay Between Chars		h Second	
Delay Between Lines	0 / 60t	h Second	
☑ Retain Line Breaks			
⊠ Word Wrap Outgoli	nn Tout		
outgoin	ig ient	OK	Cancel

The last step before actually dialing is to complete the phone settings so the Mac can dial for you.

- □ Choose the Phone Settings... command from the Phone menu.
- $\hfill\square$  When the dialog box appears, type your local access phone number of CompuServe in the typing field.

If you're not using a Hayes modem, an Apple modem, or compatible equipment, consult your modem manual to see how to specify the phone number (you may need to type some special characters before the phone number).

The rest of the defaults are what we want.

Tone is the default Dial button, indicating you have a touch-tone telephone (a push-button phone that makes a tone for each number you dial). If you have a rotary-dial phone or if you hear a clicking sound instead of a tone sound when you dial, click the Pulse button. Click the Mixed button if you're using a touchtone telephone but you live in a pulse neighborhood.

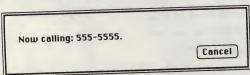
□ Click the OK button.

Phone Set	tings		
Phone Nu	mber		9
555-555	5		
Dial	Tone	O Pulse	○ Мінеd
Number o	f Rings Before f	Inswer 3	
Modem	○ Apple 300	● Apple 1200	Other
			OK Cancel
			*

Now you're ready to dial. This is the easy part.

□ Check to be sure your modem is turned on, and choose the Dial... command from the Phone menu.

As the modem dials, you'll hear tones just as if you were dialing by hand. You'll also see a message box like this:



Then you'll hear the phone ring and if all goes well you'll eventually hear a click and some high-pitched tones indicating the connection has been made. When this happens, you'll see another message.

The connection is established.

You've successfully made the connection. All you need to do now is enter the Host Name, your User ID, and your Password (a process called logging in). You'll learn what these are when you sign up for CompuServe, and are assigned

Now it's up to you to navigate around the information service, locate your mailbox, and use the commands of the information service to download the report. Information services like CompuServe, The Source and MCI Mail come with manuals with specific instructions for doing this. There is usually on-line help available, as well as a customer service department to assist you.

When you've downloaded the mainframe's sales file your MIS manager left in your information-service mailbox, leave the information service (this is called logging off). Choose Hang Up... from the Phone menu to hang up.

Now you can quit MacTerminal.

□ Choose Quit from the File menu.

# **An Xmodem Connection**

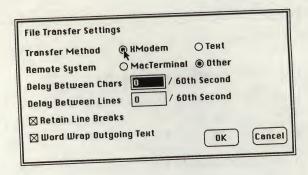
Text transfers are the simplest kinds of connection to make and usually they are fine for small text files. But the problem with text transfer is that if you get a telephone line that isn't clear (a poor connection), you can get a lot of unwanted characters, or "garbage," in your file. If your file is short, it's not a major problem to clean it up in your word processor or reconnect and try the transfer again. If you're receiving a thousand records, however, this is not a good option.

Another way to transfer files is to use what's called the Xmodem (or Christiansen) protocol, or standard. With Xmodem protocol, a file is broken into blocks. Each block is sent and then checked to be sure it was successfully received. If there are errors in the version received, the same block is sent again, until it is successfully received. Transmission will be error-free, but transfers take

Both MacTerminal and Versaterm support Xmodem transfers. Your mainframe or information service must also support the Xmodem protocol as well.

To set up a file transfer using Xmodem:

 $\hfill\Box$  Choose the File Transfer... command on the Settings menu. Click the Xmodem button to specify the Xmodem transfer method.

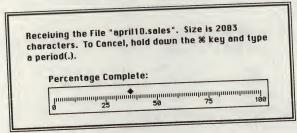


- □ Click the OK button.
- □ Now choose the Dial... command from the Phone menu.

Your modem will dial the information service the same way it did with the text transfer. The settings in the File Transfer... menu apply only to uploading and downloading files.

□ After logging in, use the information-service commands to find your mail and download it as a file.

While the file is being transferred, you'll see this message:



This message tells you how the file transfer is progressing. When the file transfer is complete, you have a file on your disk containing the information that was left in the information service for you. The file has the same name as was used when it was transferred to the service (for example, April10.sales). Now all you need to do is log off, quit the MacTerminal program, and you're ready to use this file with File.

# Using the Mainframe Information with File

Now that you've downloaded the mainframe file to the Mac, you're ready to load File and see how the information in the file looks.

□ Load File and open a new datafile. Name it something like April Mainframe Sales.

You can use this datafile each week when you download mainframe information until you have an entire month's worth. Then, depending on the amount of information, you can either start a new datafile for the next month, or you can continue using this one.

Before loading the text file, you'll need to make a form with the fields that will correspond to the position and information type of the mainframe information using File's default List Helper form.

□ Type these field names and types:

Field Name Information Type
Customer Code Text
Part Number Text
Part Description Text
Volume Number

That's all there is to the form. You may want to do some formatting changes, such as widening the Part Description field to twice its size, and widening the Customer Code field.

□ Choose Save Form As... from the File menu. Type *Mainframe Form* as the name of your form and click OK.

This way, if your disk is full at the end of the month, you can start a new disk, choose New Datafile... from the File menu, name it, load in this form, and format the fields so they'll become part of the new datafile and you won't have to re-create it.

- □ Click in the datafile window to make it active.
- $\hfill\Box$  Click on the word New to select the new record.
- $\hfill\square$  Choose Open Datafile... from the File menu. Double-click on the file named April 10. sales.

The April10.sales datafile is loaded into your new April Mainframe Sales datafile. If you used straight text transfer, don't be disturbed if you see your login and log-off information in File as an extra record or two. Just select the records with this information and delete them with the Backspace key. You'll also have to do this with the field headings. They're transferred as part of the file. When you're finished and you've printed it on your printer, your datafile should look like the printout in Figure 9-9.

There are two problems you might encounter when loading this file if you've done a straight-text transfer (not an Xmodem transfer). If all of your information for each record is in the first field, then you have a tab problem. As mentioned earlier in this chapter, Microsoft File expects each field to be separated by a tab. Some mainframes remove tabs when they transfer files and replace them with spaces. Talk to your mainframe expert about how to turn off

Figure 9-9. A printout of a sample sales datafile downloaded from a mainframe computer

ner Code WP-07 TL-01 ISI-04	014607	Part Description Disk Controller Multivoice Synthesis	1,50 50,00
TL-01	014607	MultiVoice Sunthesis	
	C14623	Multivoice Synthesis	
		THE OFFICE MODORIL	80,00
151-04	C165HC256L16	62ns CMOS 256K Memory	3,00
WB-07	C18951A	11/0 Expansion	50,00
71 01		MultiVoice Rom	3,00
		COU	
WP-07		Mamoru Controller/Management	6,00
WP-07		LIC CMOS 16v4 Penister	2,00
151-04		HS CHOS TOX4 Register	2,00
151-04	C165HC398	HS CMOS 50ns 64K Memory	10,0
MSI-04	C165HC64L20	THE CMOS SONS 64K Memory	, .
	WP-07 WP-07 WP-07 SWP-07	TL-01 C14624 WP-07 C18906A WP-07 C18905A 151-04 C165HC870	TL-01

this tab-translating feature. If all the information is in the first record, you've encountered the second problem. File expects each record to end with a carriage return. You'll need to discuss this problem with your mainframe expert. He or she will either be able to change the terminal settings or edit the mainframe report to ensure that each line ends with a carriage return.

# Using the Sales Support and Mainframe Sales Datafiles Together

The last step is to redesign the Sales Support datafile so it is more useful when used with the new mainframe datafile.

The mainframe datafile lists parts by part number and description rather than by category (CPU/Memory, Application Specific, Systems, or High Tech). The Sales Support datafile needs to pull the part numbers out of the four categories and add a design-number field so parts for a particular project can be compared to the actual sales in the Mainframe Sales datafile.

The best solution is dividing the Sales Support datafile into two parts: Design-In Customers and Design-In Products. The Design-In Customers portion looks like the printout in Figure 9-10.

You can use the Design-In Customers portion to store information about the customer, the FSE, and the FSE's notes and remarks about the project and the process—that is, how the FSE actually worked with the customer on the project. This datafile is used primarily for the notes and remarks, but when necessary can be used with either the mainframe datafile or the Design-In Products datafile, since all have customer-code and design-number fields.

Figure 9-10. A printout of a sample Design-In Customer portion of the Sales Support datafile

Bellevue, WA   For Heary   Western		Office:	Pate May 26, 1985
Religh Hodgekiss  Castemer Rame:  Red Wing Products  Set ributor:  Wonder Supply  Derige: A Mander:  B5-RWP-07-6  Meder:  Automated vater knife (outs uniform fish pertions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysts of fish passing their camera.  Remarks:  Remarks:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interraction.		Field Service Engr:	
Red Wing Products  Bit ribetor:  Wonder Supply  Berige to Member:  85-RWP-07-6  Meter:  Automated vater knife (outs uniform fish portions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysis of fish passing their camera.  Remarks:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interraction.		Ralph Hodgekiss	City Edmonds
Wonder Supply  Worder Supply  Berige & Member:  B5-RWP-07-6  Meter:  Automated vater knife (outs uniform fish portions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysis of fish passing their camera.  Remarks:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction.		Red Wing Products	
Besign to Member:  B5-RWP-07-6  Motor:  Automated vater inife (cuts uniform fish portions) uses all the features of the 65020 whisper found. Dual-ported RAM significant in making video analysis of fish passing their camera.  Remarks:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction.		Distributor:	WBL-RWP-07
Metes:  Automated water knife (outs uniform fish portions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysis of fish passing their camera.  Remards:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction.		Design-In Number:	Referral *. B84-012
Automated water knife (outs uniform fish portions) uses all the features of the 65020 whisper board. Dual-ported RAM significant in making video analysis of fish passing their camera.  Remarks:  The lead engineer on the project was concerned about the interrupt latency and the whisper board's interaction.	- 1		
The lead engineer on the project was concerned about the interrupt latence and the whiches		r mer-optic interface essential.	rtions) uses all the features of the 65020 whisper g video analysis of fish passing their camera.
heard register on the pre-ject was concerned about the interrupt latency and the whisper board's litter action with the bus. Lending him an H-series chass's with a 100-map disk drive save him and his people a chance to see it would work for sure" and was very influential in	1		
		board's interaction with the bus. Lending him- gave him and his people a chance to see it wou getting this one.	nd about the interrupt latency and the whisper an M-series chassis with a 100-meg disk drive Ild work Yor sure' and was very influential in

The second datafile (Design-In Products), shown in Figure 9-11, is used to store quantitative information about the parts.

The information in this datafile is then stored by customer code and part number, so the records will correspond with the records in the Mainframe Sales datafile. That way, you can select all the records with a win in the Outcome field, sort them by customer code, and compare your predicted volumes to the actual sales in the Mainframe Sales datafile, as shown in Figure 9-12.

Figure 9-11. A printout of a sample Design-In Products portion of the Sales Support datafile

	Carlomer Code	Design Humber	Part Rumber	1.5			
1	WBL-ATL-01		C189068	The same of the same of	Desision By	Probability	- Andrews
2	WBL-FTE-08		C189HC05	125,000 total	May 25, 1985		win
	WBL-LFR-01		-	140,000 total	Jul 6, 1985		gone
4	WBL-MGN-02	AC		200/month	Jul 30, 1985	30%	
5	WBL-MSI-03			len'non total	Jun 20, 1985	80%	
6			C 189HC65	1,000/month	Jun 12, 1985	40%	
7			C165HC396	500/month	Jun 19, 1985		
8		85-PQK-20-2	CC165010	[8,000 total	Sep 20, 1985	90%	
9		85-PWP-07-6		20,000/year	Jul 15, 1985	20%	
_		85-RWP-07-6	C18906A		Jun 27, 1986	20%	
					Dall 27, 1900	70%	win

Figure 9-12. Comparing predicted sales to actual sales in the Mainframe Sales datafile

# **Design-In Products**

				Possible Volume	Decision By	Probability	Outrom
	To Cade	Design Humber	Part Humber		May 25, 1985	50%	win
	Customer Code	85-ATL-01-1	C189068		May 23, 1903	80%	gone
1	MOL-WIL A.	IDD-WIF AT	C189HC05	40,000 total	Jul 6, 1985	30%	
2		102 115 40	C165020	200/month	Jul 30, 1985		
Ŧ	WBI -I FR-01	102-FLK A1 .		60,000 total	Jun 20, 1985	80%	
	WBL-MGN-02		C189HC705	00,000	Jun 12, 1985	40%	
	HOL HOLL TE	85-MSI-03-3	C189HC65	1,000/1110/14	Jun 19, 1985	90%	win
5	MDF-1191 OF	85-MSI-04-1	C165HC396	500/month	Juli 19, 1905	20%	
6	MOL HOL		CC165010	8,000 total	Sep 20, 1985		lose
7	WBL-NVI-02	85-NVI-02-1		20,000/year	Jul 15, 1985		
	101 DOK 20	85-PQK-20-2		5,000/year	Jun 27, 1986	70X	win
	WBL-RWP-07	85-RWP-07-6	C18906A	12,000/ gedi	Journal Property of the Proper		

# Mainframe

			Part Description	Volume
	Customer Code	Part Number		1,50
-	WBL-RWP-07			50,00
-	MOL VIII	51.4607	MultiVoice Synthesis	80,00
	HOP HIS A.	DISEUCOSSI 16	62ns CMOS 256K Memory	
	WBL-MSI-04	LIBSHLZ30LTO	1/O Expansion	3,00
4		C18951A	MultiVoice Rom	50,00
	WBL-ATL-01	C14624		3,00
3	WBL-RWP-07	C18906A	CPU	6,00
6	WDL-KWF-OT	C18905A	Memory Controller/Management	2.0
7	IMOF VIII A.	C165HC870	HS CMOS 16x4 Register	
8	WBL-MSI-04		HS CMOS Bus Drivers	2,0
9	WBL-MSI-04	C165HC398	HS CMOS 50ns 64K Memory	10,0
3	WBL-MSI-04	C165HC64L20	HS CMOS Sons B4K Helilory	

You can also use this datafile to design useful reports, similar to those made from the Sales Support datafile. It's up to you to determine which reports you'll need. One could be a report by customer showing all the parts the customer is using on each project. Another could be a report by part number to show all the customers using a particular part and what volume of parts is being used. You could design a third report by sorting by part number and by outcome (loss or gone) to better track projects for which the clients chose not to use your products. In addition, you could sort by design number and use this information with the Design-In Customer datafile, as shown in Figure 9-13.

You can compare parts used in the project with the notes and remarks to get an overview of the project, the customer, and the sales process.

Figure 9-13. Using design numbers in Design-In Customers and Mainframe Sales to find current data

Office ·		
	May 25, 1985	
Bellevue, WA Field Service Engr:	Torritory Western	
	- Incatein	
Ralph Hodgekiss	City Edmonds	
AlphaTel		
Distributor:	Code WBL-ATL-01	
Wonder Supply		
Design-in Number:	Referral *. 885-019	
85-ATL-01-1		
Notes:		
remarks:	single chip solutions we offer look good. The spec is hardware/software support of features we offer is	
Remarks:	single chip solutions we offer look good. The spec is hardware/software support of features we offer is good to be solved as the solved solved as	
Remarks:	support of features we offer is	
Remarks:	support of features we offer is	
Remarks:	support of features we offer is	
Remarks:	support of features we offer is	
Remarks:	support of features we offer is	
Remarks:	support of features we offer is	
Permants:	support of features we offer is	

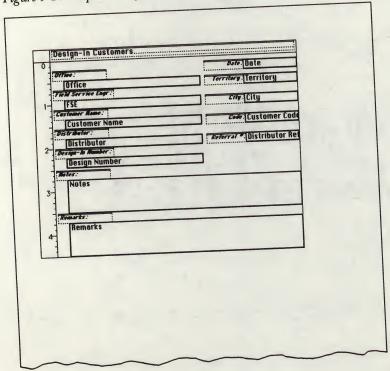
	Customer Code	Design Humber	Part Humber				
1	WBL-ATL-01			The second of the second of	Desiries By	Probability	1
		03-A1L-01-1	C189068	125,000 total			
		85-FTE-08-3	C189HC05		May 25, 1985	50%	win
	WBL-LFR-01			40,000 total	Jul 6, 1985		gone
4	W8L-MGN-02				Jul 30, 1985		
5		85-MGN-02-1	C189HC705		Jul 30, 1903	30%	
-	WBL-MSI-03		0.00		Jun 20, 1985	80%	
6	WBL-MSI-04		0.1.4	1,000/month	Jun 12, 1985		
7			C165HC396	500/month	Jun 19, 1985	40%	
-		85-NVI-02-1	CC165010	A 4 7 7	ouii 19, 1905	90%	win
8	WBL-PQK-20	85-PQK-20-2			Sep 20, 1985	20%	
9	W8L-RWP-07	85-DWD A3 4		20,000/year	Jul 15, 1985		
		85-RWP-07-6	C18906A		lun 43 (20)	20%	lose
				- Jood of Seel	Jun 27, 1986	708	win

The Design-In Customers datafile uses a non-List Helper form just like the Sales Support datafile. It has these fields and information types:

Ei-Id Name	<b>Information Type</b>
Field Name  Date Office Territory FSE City Customer Name Customer Code Distributor Distributor Referral Number Design Number Notes Remarks	Date Text Text Text Text Text Text Text Te

Follow the same steps you used when constructing the Sales Support datafile. Your completed form will look like the printout shown in Figure 9-14.

Figure 9-14. A printout of a Design-In Customers form



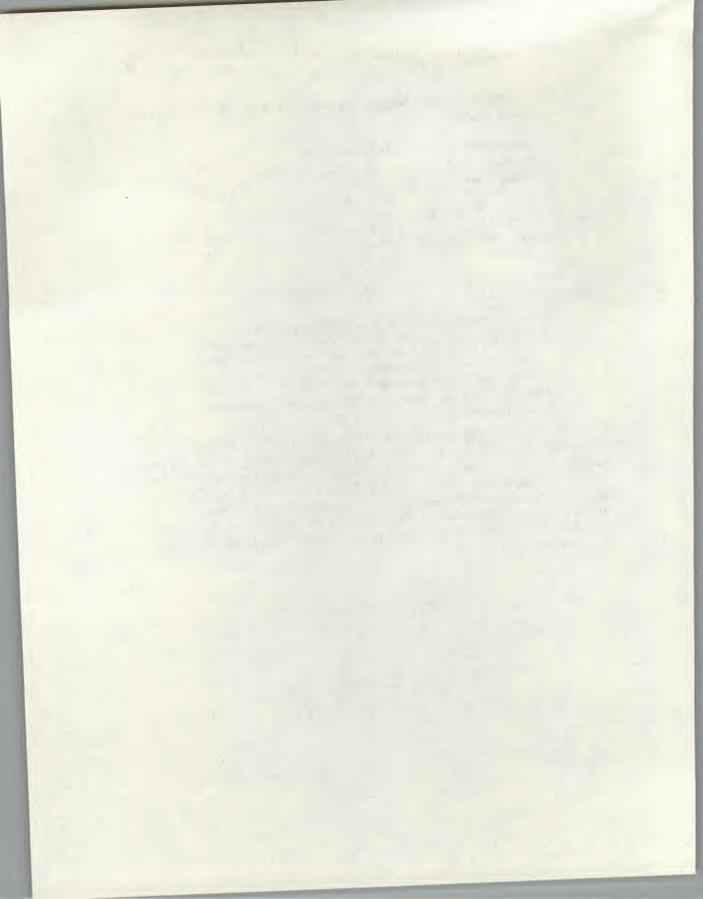
The Design-In Products datafile uses a simple List Helper form, with these field names and types:

Field Name	Information Type
Customer Code Design Number Part Number Possible Volume Decision By Probability Outcome	Text Text Text Text Text Date Number Text

You'll generate the reports you need the same way you did when using the Sales Support datafile:

- 1. Sort the records in the order you want them for the report.
- 2. Open the report window, drag the fields you don't want printed in the report into the Not Shown area, and arrange the remaining fields in the order you want them in the report.
- 3. If you want totals for any columns, add them in the report window.
- 4. Preview the report, complete the page setup, and print the report.
- 5. Save the report on disk.

Now that you know how to get the information you need from the company mainframe via an information service, and have rearranged your sales support datafile to work with the mainframe information, you can track both sales and support more effectively. In our example, Diana can better see how Chips' products work and what customers really want, and she can see how her FSEs are working with the customers. She can also electronically share this information quickly and easily with any of the other sales offices by using Macs, File,



# Sharing Data with Other Programs



File alone is a valuable business tool. But combined with Microsoft Multiplan, Microsoft Chart, and Microsoft Word, it becomes much more powerful. This chapter shows you how to use the spreadsheet program (Multiplan), the business graphics program (Chart), and the word-processing program (Word) to do a variety of tasks. I've chosen Microsoft products because all of them have similar file formats and are designed to work together.

This chapter uses a small publishing company called Fictitious Publishing as a model. Fictitious Publishing's marketing director, Larry Lightfoot, uses Multiplan to track actual sales on worksheets like the one shown in Figure 10-1, and he uses worksheets like the one shown in Figure 10-2 for forecasting books sold. Each month after entering information in the worksheet for actual sales, he copies the actual figures for number of books sold to his forecast worksheet.

Larry finds this information useful. But in addition, he would like a composite quarterly and year-to-date overview of forecasts and sales for each book. He thinks he can do this with File, and, by bringing in the information from Multiplan using the Clipboard, he won't have to re-enter it by hand and risk getting the wrong figures because of a typing error. So Larry sets up the datafile shown in Figure 10-3, with data copied in from Multiplan.

Larry finds the information presented in File this way extremely useful, but his managers like to see a graphic representation of his numbers. So Larry decides to use the Multiplan actual and forecast figures in Chart to create a chart, shown in Figure 10-4, that compares actual sales with forecast sales for each book at the end of each quarter.

Figure 10-1. A Multiplan worksheet containing sales figures for Fictitious Publishing

				5	6	7	8
-	1 2	3	1	3			
-					Publ.	Retail	Total a
늰	Title	Author	ISBN *	Status	Date	Price	Warehou
2					bato		
3					4/12/84	\$8.95	2,0
-	Trivial Accomplishments	S. Ashenfelter	34096	shipping	8/12/79	\$3.95	4,0
5	: [r]VIQI ACCUMPTION	C.B. Fidler	55908	shipping		\$3.95	
6	In Search of Medicol IV	L. Matthews	33921	not yet publ	4/1/86		10,0
7	Thinner Hair in 30 Days	C.P. Parsons	38638	shipping	12/31/83		5,0
8	Drawing on the Right Side	J.K. Hinsch	89480	shipping	10/15/83		
9	Technobabble Dictionary	C Henry	914845	shipping	2/16/84	\$19.95	
10	Coming of Age in Silicon Valley						
11			••••••••••				
12	T						
13	7":						
14				••••			
15	<b>-</b>						
16							
17					••••••••		
18						:	
19					•••••••		
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con	tü	u	ea

1								40	17	18	19	20
1		10	11	12	13	14	15	16				
1	9	10										-Monthly
				T-1-1				Monthly:				
2			-Weekly	1 D tals	Wask 4		Wheale	Retail	Direct	Book Club	Unita	
3		Week 1	Week 2	Week 3	WOONT							
4							115	120	40	100		\$1,391.
5		85	105	90	70		145	40	16	0	201	\$412.
		45	56	48	52		0					\$0.0
6		0	0	0	0				300	400	2,380	\$12,045.0
7		220	190	250	220		880		200			
8		150	150	160	140		600			800	3.700	\$30,124.
9				300	450		1,500	1,200	200			
10		400	330									• • • • • • • • • • • • • • • • • • • •
11					• • • • • • • • • • • • • • • • • • • •	:					9 050	\$49,165.
12		i			932	TOTAL	3,240	2,360	756	1.,300	7,000	
13	TOTAL:	900	851	848			/					
14												
15								•••••••	:			
16								•••••••••				
		• • • • • • • • • • • • • • • • • • • •							• • • • • • • • • • • • • • • • • • • •			
17		· · · · · · · · · · · · · · · · · · ·	••••••••									
18			•									
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20				••••							•••••••••	
21												
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23												
24												
25									••••			
	•••••											
26			:									

continued

# December - 1985

-	21	22	23	24	05				
1					25	26	27	28	1 00
2			• • • • • • • • • • • • • • • • • • • •						29
3	Closing Bal	BO/NYP	• • • • • • • • • • • • • • • • • • • •		Quarter to	Date	• • • • • • • • • • • • • • • • • • • •	Current	
4			• • • • • • • • • • • • • • • • • • • •	Net Units	Dollars	Returns			
5	1,625	•••••	• • • • • • • • • • • • • • • • • • • •					Net Units	Net Dollar
6	3,799	***************************************	• • • • • • • • • • • • • • • • • • • •	1,527	\$6,833.33	40			
7	0	5,000	• • • • • • • • • • • • • • • • • • • •	1,040	\$2,054.00	10	••••••	3,054	\$13,666.6
В	7,620			0	\$0.00	0		2,095	\$4,137.6
9	4,000	•••••••••••••••••••••••••••••••••••••••		5,052	\$27,659.70			0	\$0.0
0	800	1,433		1,968	\$8,806.80	20 10		10,104	\$55,319.4
1				8,215	\$81,944.63	30		3,936	\$17.613.6
2						30		16,430	\$163,889.2
3	17,844				•••••••••••••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••••••••••••			
1		6,433	TOTAL:	17,802	\$127,298.45	110			
5							TOTAL:	35,619	\$254,626.5
Η.	•••••••••••••••••••••••••••••••••••••••					•••••••••••••••••••••••••••••••••••••••			
-	•••••••••••••••••••••••••••••••••••••••				***************************************	••••••••••••			
3									
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4					••••••••••••••••••••••••				
4				***************************************					
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				•••••••••••••••••••••••••••••••••••••••			***************************************		
									**********

continued

# December - 1985

1		31	32	33	34				
2					37	35	36	37	38
-		*********	Pres	Fiscal YTD					- 30
3	Net Returns		Net Units	Net Dell			Gran	d:Total	
4				Net Dollars	:Net Returns		Net Units		
5	80		5,002		i				
6	30				100		9,511	440	
7	0	• • • • • • • • • • • • • • • • • • • •	2,847	\$5,622.83	38		24 255	\$42,561.73	
8	50		0	\$0.00	0		47, 455	\$47,903.63	
9	10		5,000	\$27,375.00	24		0	\$0.00	
10	45		7,025	: \$18.011 88	0 24 15	• • • • • • • • • • • • • • • • • • • •	31,881	\$174,548.48	
11			12,012	\$119,819.70	200		20,657	\$92,440.08	
12					200		41,212	\$411,089.70	••••••
13					*******************				
14	215	TOTAL:	28,886	\$193,213.35					••••••
					377	TOTAL:	127,518	\$768,543.60	••••••
15									
16				• • • • • • • • • • • • • • • • • • • •					
17							***************************************		
18		•••••••••••••••••••••••••••••••••••••••				***************************************			
9			•••••••••••••••••••••••••••••••••••••••			***************************************			
20		••••••••••••••••				•••••••••••••••••••••••••••••••••••••••	••••••		
1	***************************************					•••••••••••••••••••••••••••••••••••••••			
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5	• • • • • • • • • • • • • • • • • • • •			***************************************	• • • • • • • • • • • • • • • • • • • •				• • • • • • • • • • • • • • • • • • • •
7								•••••••••••••••••••••••••••••••••••••••	• • • • • • • • • • • • • • • • • • • •
8									
9			***************************************						
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Figure 10-2. A Multiplan worksheet containing sales-forecast figures for Fictitious Publishing

						6	7
		2	3	4	5	-	
_	1					September	September
		July	July	August	August	Forecast	Actual
2		Forecast	Actual	Forecast	Actual	512	
3		500		465		400	
4	Trivial Accomplishments	300		300		0	
5	In Search of Mediocrity	0		0		1800	
6	Thinner Hair in 30 Days	1500		1500		850	
7	Drawing on the Right Side	600		600		3000	
8	Techobabble Dictionary			2500		3000	
9	Coming of Age in Silicon Valley	2500					
10				5365		6562	
11	TOTALS:	5400					
12				•••••••••			
13							
14					• • • • • • • • • • • • • • • • • • • •		
15							
16							
17		1					
18							
19	<u> </u>						
20	)	•••••••					
21	<b>I</b>	••••••••					
22	2						
2:	3		••••••••••				
2.	•		••••	***************************************			
2							
21							
2						Ī	
2			<u> </u>				

continued
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Forecast - 1985

					12	13	14	15
	8	9	10	11	12	13		
1						December		
2	October	October	November	November	December	Actual		
3	Forecast	Actual	Forecast	Actual	Forecast	Actua		
4	550		577		600			
5	400		450		450			
6	0		0		0			••••
7	2000		2200		2200			
8	900		900		950			
9	2500		2200		2200		• • • • • • • • • • • • • • • • • • • •	***************************************
10	2300	·····						
	6350		6327		6400		·	
11		::						• • • • • • • • • • • • • • • • • • • •
12							•••••••••	• • • • • • • • • • • • • • • • • • • •
13		• • • • • • • • • • • • • • • • • • • •					• • • • • • • • • • • • • • • • • • • •	
14							•••••••	
15		·:·····						
16								
17								
18			••••					
19		••••••••					:	
20			••••					
21								
22			••••					
23							:	
24								
25		••••••••••						
20								

Figure 10-3. A printout of a datafile containing sales and forecast figures

Title	Author	ISBN .	Status	1 6		
ITIVIAL ACCOMP	S. Ashenfelter	34 006	shipping	Pub. Date	Retail Price	Warehouse
n Search of Mei	C.B. Fidler	55,000	shipping	Apr 12, 1984	8.95	
hinner Hair in	Matthews	33,900	shipping	Aug 12, 1979	3.95	2,00
rawing on the li	P Percono	75,921	not yet publ	Apr 1, 1986	3.95	4,00
echnobabble Di.	IK Hinech	30,038	shipping	Dec 31, 1983	10.95	
oming of Age i	Henry	89,480	shipping	Oct 15, 1983		10,00
	9	914,845	shipping	Feb 16, 1984	8.95	5,00
				1, 1904	19.95	4,50

continued

Blank I	Week I	Week 2	Week 3	1.1.		
	85	105		Week 4	Blank 2	Wholesale
	45		90	70		
	45	56	48	52		11
	0	0	0	J2		14
	220	190	050	- 0		
	150		250	220		
	400	150	160	140		88
	400	350	300			60
			000	450		1,50

continued

Retail	Direct	Club	Unite/Manth	0.		
120	40	100	CHICSTIUNIEN	Sales/Month	Balance	Back Order
40	16	100	3/3	1,391.725	1,625	DOCK OI US
0	0	0	201	412.775	3,799	
800	300	400	0	0	0	EA
200	200	400	2,380	12,045	7,620	5,00
1,200	200	800	1,000	5,191	4,000	
		000	3,700	30,124.5	800	1,43

continued

Units/QuarterS	ares/quarter	Returns	Blank 4	I limite a durant	
 1,527	6,833.325	40		Units/Year	Sales/Year
 1,040	2,054	10		3,054	13,666.65
 0	0	10		2,095	4,137.625
5,052	27,659.7	0		0	4,137.023
1,968	8,806.8	20		10,104	55,319.4
8,215	81,944.625	10		3,936	17,613.6
	- 1,5 44.025	30		16,430	163,889.25

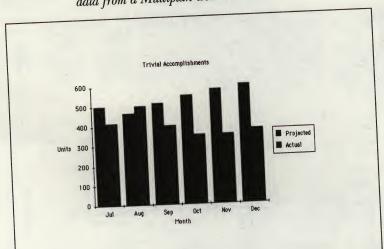


Figure 10-4. A chart created with forecast and actual sales data from a Multiplan worksheet

Larry can add a field to the datafile shown in Figure 10-3, and copy in the chart he created for each book using the data from the Multiplan worksheet, as shown in Figure 10-5. Now he and his managers can see "the big picture" as well as the numbers.

Now, because Larry has all this information stored in Multiplan, Chart, and File, he can include it in Word documents, such as memos, reports to management, letters to the sales staff or regional sales offices, and reports on royalties to authors. In fact, the possibilities for using this information are almost limitless.

In this chapter, I'll demonstrate how to use this information to write a memo from Larry to the acquisitions staff explaining the current sales trends in preparation for a meeting between the acquisitions and marketing departments next week. The completed memo, which contains information from Multiplan, Chart, and File, is shown in Figure 10-6.

This chapter is not intended to teach you how to use Word, Multiplan, and Chart, but it does show you how you can transfer spreadsheet information from Multiplan to Chart and Word, and a graph from Chart to File and Word.

To make the exchange of information between these programs even easier, if you have a 512K Mac, you can use Apple's Switcher program to partition the machine's memory and use more than one program in memory at the same time.

Figure 10-5. A datafile using data from Multiplan and graphics from Chart

Title: Trivial Accomplishments	Fiscal YTD	Current Quarter	
Author: S. Ashenfelter	3,054	1,527	Sales vs Projections  Trials assemptions
Date: Apr 12, 1984			
ISBN *: 34,096 Status: shipping	\$13,666.65	\$6,833.33	See See See See See See See See See See
Price:\$8.95			· I and the last of the last o
Title: In Search of Mediocrity	Fiscal YTD		Plants
	2,095	Current Quarter	Sales vs Prejections
Author: C.B. Fidler	2,093	1,040	In Secrets of Paddisoring
Date: Aug 12, 1979	44 177 45		311
	\$4,137.63	\$2,054.00	Street St
Title: Thinner Hair in 30 Days			Plantin New Box
		Current Quarter	Sales vs Prejections
Pub Pate: Apr 1, 1986	0	0	Jee clons
SSN *: 33,921 Status: not yet publ  Retail  Price: \$3.95	\$0.00	\$0.00	

continued

Title: Drawing on the Right Fiscal YTD **Current Quarter** Side... Sales vs Projections 10,104 5,052 Author: C.P. Parsons Pub Date: Dec 31, 1983 \$55,319.40 \$27,659.70 ISBN \*: 36,638 Status: shipping Retail Price: \$10.95 Title: Technobabble Dictionary Fiscal YTD Current Quarter 3,936 1,968 Author: J.K. Hinsch Pub Date: Oct 15, 1983 \$17,613.60 ISBN \*: 89,480 Status: shipping \$8,806.80 Retail Price: \$8.95 Title: Coming of Age in Silicon Fiscal YTD Current Quarter Valley 16,430 8,215 Author: C. Henry Pub Date: Feb 16, 1984 \$163,889.25 \$81,944.63 ISBN \*: 914,845 Status: shipping Retail Price: \$19.95

Figure 10-6. A memo containing information from Multiplan, Chart, and File, created in Word

# Ficultious Publishing 110 Park Avenue New York, NY 10012

# **MEMO**

To: Alexandra Pennington Acquisitions Staff From: Larry Lightfoot Marketing Staff Re: Changing Market Trends

Dear Alexandra,

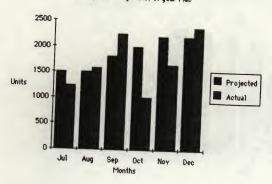
In preparation for our meeting next week, I thought it might be helpful to let you know the marketing department's perspective on the current book market and how we see it changing.

Trivial Accomplishments In Search of Mediocrity Thinner Hair in 30 Bays Drawing on the Right Side Technobabble Dictionary Coming of Age in Silicon Valley	Forecast 550 400 0 2000 900	October Actual 350 211 0 1015 400 3112	November Forecast 577 450 0 2200 900 2200	Novembe Actual 350 131 0 1657 2415 2415	r December Forecast 600 450 0 2200 2200 2200	December Actual 375 201 0 2380 3700 3700
TOTALS:	6350	4076	6327	5121	6400	7656

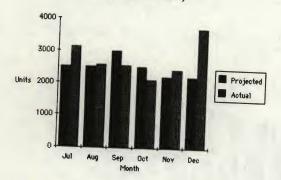
Our strong performers over the last quarter have been our scientific and technical books, <u>Drawing on the Right Side of your Mac</u> and <u>Coming of Age in Silicon Valley</u>.

continued





# Coming of Age in Silicon Valley

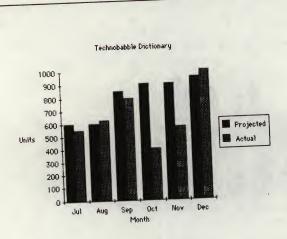


As you can see, both have met and exceeded our projections and continue to be strong. This is in spite of projections for a weak technical market.

Also, our book,  $\underline{\text{Technobabble Dictionary}}$ , continues to sell consistently.

Figure 10-6. A memo containing information from Multiplan, Chart, and File, created in Word

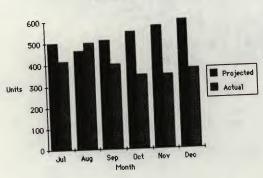




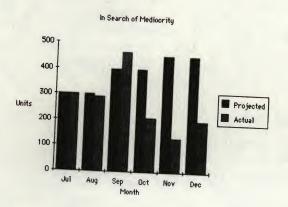
It falls into the scientific and technical category, but it is different in that it seems to have almost a cult following and has been selling consistently for over two years.

Our business books,  $\underline{\text{Trivial Accomplishments}}$  and  $\underline{\text{In Search of Mediocrity}}$ , are not doing as well as projected.

Trivial Accomplishments



continued



In light of these figures, it's the recommendation of the marketing department that we place more emphasis on scientific and technical books, but not exclusively. Our newest how-to book, Thinner Hair in 30 Days, has extremely good prepublication sales.

I'm looking forward to talking with you about this at our meeting Tuesday.

Sincerely,

Larry Lightfoot

Switcher is distributed by Apple and you can get it for \$19.95 from your Apple dealer. With Switcher, you can merely switch between programs instead of quitting one and loading another each time you want to work in a different one. This is a real help when working with several programs at once, as we do in this chapter. With one click of the mouse button, you can switch from a Multiplan worksheet to an open chart in Chart. Later in this chapter, when we start moving back and forth between applications repeatedly, I'll give detailed instructions on using Switcher. But, while we're moving only one piece of information at a time early in this chapter, we'll use the Mac's built-in Clipboard.

# **Using Multiplan to Track Sales**

Larry Lightfoot keeps monthly sales information in a Multiplan worksheet and updates it weekly. The sales information we'll be using in this chapter is taken from the worksheet shown in Figure 10-7. Information in the worksheet consists of the title and author for each book, the ISBN (International Standard Book Number—the sample ISBNs in this chapter are, of course, fictitious), the status of the book (whether it's shipping, not yet published, or out of print), the book's publication date, the retail price, and the total number of books at the warehouse. Next are weekly total sales figures for each book, followed by monthly sales information. Monthly sales are categorized by the type of sale (wholesale, retail, direct, or book club), and then total monthly sales are computed both in units and in dollars. The closing balance column contains the number of books remaining in the warehouse after the current month's sales have been computed; this is the column Fictitious uses in deciding when to reorder books. And the BO/NYP column contains information about books that are back-ordered and orders for books that are not yet published.

In addition to the weekly and monthly sales totals, this worksheet also contains quarter-to-date, fiscal year-to-date, previous fiscal year-to-date, and grand total sales information for each book, both in units and in dollars. The column called Net Returns reflects a condition unique to the book industry. Retailers who order books and then aren't able to sell them may return these unsold books to the publisher. These unsold books returned to the publisher are known as returns. Returns need to be computed into the total sales figures.

The sales information in the Multiplan worksheet shown in Figure 10-7 is what Fictitious Publishing finds useful. You can copy this worksheet or you can set up a Multiplan worksheet that meets the needs of your business.

□ Create and save a Multiplan worksheet containing sales figures.

Figure 10-7. Monthly sales worksheet for Fictitious Publishing

		Decemi	ber - 1985				
Title  Trivial Accomplishments In Search of Mediocrity	Author	15BN *	Status	Date		Total at Warehouse	
Thinner Hair in 30 Days Drawing on the Right Side Technobabble Dictionary Coming of Acets Side	L. Matthews C.P. Parsons J.K. Hinsch C. Henry	33921 36638 89480 914845	shipping not yet publ shipping shipping	8/12/79 4/1/88 12/31/83	\$3.95 \$3.95 \$10.95 \$8.95	4,000 0	

				Dece	mber - 1	1985				
Week 1	-Weekly	Totals Week 3			Monthly	y				
					Ketaii	Direct	Book Club	Units		Closing Bal
45	105 56	90 48	70 52	115 145	120	40	100	375	\$1,391.73	1.825
220	190	0 250	0 220	0	: 0	. 0	0		W712.70	3,799
150	150 350	160 300	140 450	600	200	300 200	400 0	2,380	\$12,045.00	7,620
				:			*************	.,	430,124.50	900
900	851	848	932	TOTAL: 3,240	2 700					

		December - 1	985		
	Quarter to	Date			
Net Units					Net Returne
1,527	\$6,833.33	40	3,054	\$13.666.65	
0	\$0.00	10	2,095	\$4,137.63	30
1,968	\$27,659.70 \$8,806.80	20	10,104	\$55,319.40	0 50
8,215	\$81,944.63	30	3,938 16,430	\$17,613.60 \$163,889.25	10
	1,527 1,040 0 5,052 1,968 8,215			Duarter to Date	

			De	cember - 1	985		
					:		
	Prev	Fiscal YTD					
	Net Units	Net Dollars	Net Returne		Gran	a:Total	
					Net Units	Net Dollars	
	5,002	\$22.383.95	100		:	\$42,561.73 \$47,903.63 \$0.00 \$174,548.48 \$92,440.08 \$411,089.70	***************************************
	2.847	\$5 622 07	100		9,511	\$42,561.73	***************************************
	0		38		24, 255	\$47,903,63	• • • • • • • • • • • • • • • • • • • •
	F 000	\$0.00	0		0	*0.00	
	3,000	\$27,375.00	24		31 881	\$0.00	
	4,025	\$18,011.88	15	***************************************	20 657	\$174,548.48	
	12,012	\$119,819.70	200		20,057	\$92,440.08	
				• • • • • • • • • • • • • • • • • • • •	41,212	\$411,089.70	
	:					: :	
TOTAL:	28.886	\$107 217 75				\$768,543.60	

## **Moving Sales Information to File**

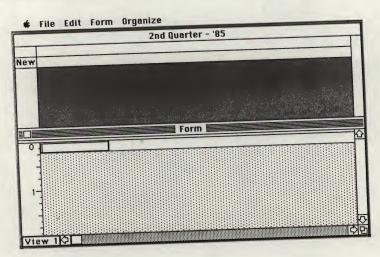
Once you have your information in a Multiplan worksheet, you can transfer all or part of that information to File. For instance, Fictitious Publishing keeps quarterly sales information in File, copied in from Multiplan, as well as graphs copied in from Chart. The graphs use the Multiplan data to show a comparison of forecast and actual sales for each book for the current fiscal year. This kind of information is good for historical records and it also helps Fictitious personnel get the big picture for each of the firm's books.

Before transferring this information from Multiplan to File, you first need to use File to create a datafile with a form that has a field for each of the categories (columns) on the Multiplan worksheet. Then make a second form for the same datafile that is more attractive, displays only the Multiplan information you want to see, and has a place for a chart (which you create in Chart using the Multiplan data and copy in later). Then all you need to do is select the fields you want to copy into File from the Multiplan worksheet, copy them to the Clipboard, quit Multiplan, open File with the datafile containing the form that has all the fields you need, paste in the Multiplan information, and then switch to the second form to view only the Multiplan information you want to see.

#### Making the transfer form

To make a form that has the same number of fields as columns in the Multiplan worksheet:

- Start File by double-clicking on the Microsoft File icon on the Macintosh desktop.
- $\hfill\Box$  Type 2nd Quarter - '85 as the name of your new data file.
- □ Insert a blank disk in your external drive, initialize it if necessary, and name it Sales Data.
- □ Click the New button.



In the form window, you can see a blank List Helper form. You'll use this List Helper form to transfer information from Multiplan to File.

Enter field names and their information types (Text, Number, Date, or Picture) so that there is a corresponding field for each column in your Multiplan worksheet. The field names you type in do not have to match the Multiplan column headings exactly, but they should be descriptive enough to tell you whether or not the information you've copied is in the proper place.

- $\hfill\Box$  Type  $\it Title$  (the name of the first field) and press Return.
- □ When the dialog box appears asking you to select an information type, press Return again to select Text, which is the default information type.

Pressing Return twice after typing a field name is a shortcut for selecting the default information type (Text).

□ Type *Author* (the name of the second field) and press Return twice to assign the Author field the Text information type.

File also offers a keyboard shortcut when you want to select an information type other than the default (Text). When the dialog box appears, press the letter key on the keyboard that corresponds to the first letter of the information type you want (for example, press N to select Number) and then press Return. You can use this shortcut while creating the rest of the fields in this transfer form.

□ Enter the following list of fields and their corresponding information types in the following order:

Field Name	Information Type
ISBN #	Number
Status	Text
Pub. Date	Date
Retail Price	Number
Warehouse	Number
Blank 1	Text
Week 1	Number
Week 2	Number
Week 3	Number
Week 4	Number
Blank 2	Text
Wholesale	Number
Retail	Number

(continued)

Field Name	Information Type
Direct	Number
Club	Number
Units/Month	Number
Sales/Month	Number
Balance	Number
Back Order	Number
Blank 3	Text
Units/Quarter	Number
Sales/Quarter	Number
Returns	Number
Blank 4	Text
Units/Year	Number
Sales/Year	Number

Notice the fields named Blank 1, Blank 2, Blank 3, and Blank 4. These are blank columns in the Multiplan worksheet that are used to separate categories of information and to make the worksheet more readable. When the worksheet information is copied to File, these blank columns are copied along with it, so you need to make a place for the blanks or the information copied in will be in the wrong fields.

That's all there is to making the transfer form. Your finished form should look like the form shown in Figure 10-8, if you scroll it horizontally. You need to create fields only for the Multiplan columns from Author through Quarter to Date. You can omit the remainder of the worksheet (Current Fiscal Year-to-Date, Previous Fiscal Year-to-Date, and Grand Total) because you don't need this information for File. You don't need some of the other information in the worksheet, such as weekly totals and monthly sales, for File either. But you have to make fields for these columns because they are contiguous to other columns that have information you do want, such as Units and Dollars in Quarterly Totals. When you transfer information from Multiplan, you'll select the cells you want transferred and copy them into the Clipboard. When you paste this information into File, File inserts it at the New record in the datafile window. So, you need to bring in everything you want in each record in one move. Select all the columns with information you want, plus any other columns that are in-between.

Figure 10-8. A completed transfer form

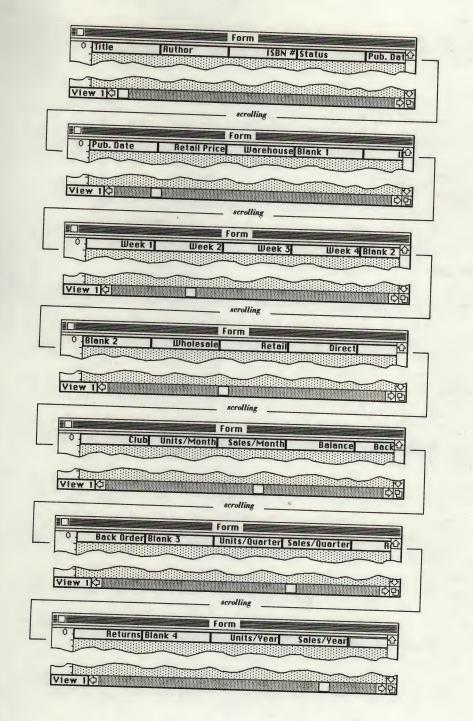


Figure 10-9. A form for displaying information from Multiplan and Chart

	Fiscal YID	Current Quarter	Sales vs Projections
Title: Title	Units/Year	Units/Quarter	Sales us Projections
Author: Author	7		
Pub		A L VOUERTON	
Date: Pub. Date	Sales/Year	Sales/Quarter	
ISBN # Status: Status	-	1	
Price: Retail Price			200000000000000000000000000000000000000

# Making the form for displaying information

Next, you need to make the second form—the form that displays selected parts of the information you'll transfer from Multiplan into File exactly the way you want to see it. It's best to use a non-List Helper form. That way, you can arrange the fields in a more meaningful layout, showing actual and forecast sales in one group, and you can add a graph from Chart to enhance the information visually. A form designed with these criteria in mind is shown in Figure 10-9.

To make this form:

 $\hfill\Box$  If necessary, scroll the form window to the right until you see the last field (Sales/Year).

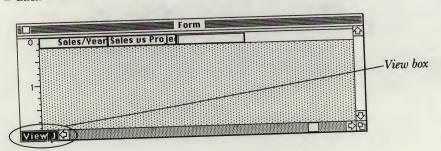
This takes you to the blank field at the end of your list of fields so you can add a picture field for the chart.

- □ If necessary, click to get an insertion point in the blank field following Sales/Year.
- □ Type Sales vs Projections as the name of the new field, press Return, press P for Picture information type, and press Return.

Now you have all the fields you need.

Next, you need to change the form to view 2, remove the check from the List Helper command, resize the fields, and add labels.

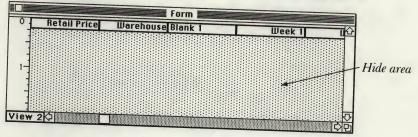
□ Click in the View 1 box in the lower left corner of the form window.



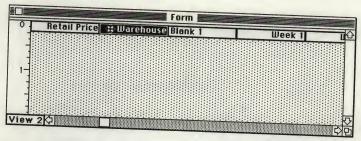
View 1 changes to view 2.

□ Scroll the form window left until the Warehouse field is visible.

Now select the fields you don't want to view in this form and drag them into the hide area. The hide area is the gray patterned area below the fields.



□ Click on the Warehouse field to select it.

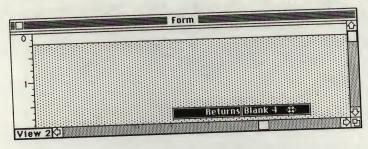


To select the rest of the fields you want to drag into the hide area:

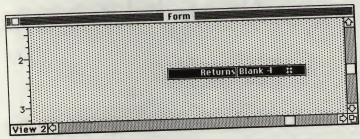
 $\hfill\Box$  Hold down the Shift key and click on the following fields:

Blank 1	Direct
Week 1	Club
Week 2	Units/Month
Week 3	Sales/Month
Week 4	Balance
Blank 2	Back Order
Wholesale	Blank 3
Retail	Returns
	Blank 4

□ Release the Shift key, position the mouse pointer on any one of the selected fields, hold down the button, and drag the selected fields down to the bottom of the hide area. Release the mouse button.



□ Now scroll the form window down, then drag the still-selected fields even farther down, until the tops of the selected fields are at the 2½-inch mark of the ruler on the left side of the form window. Release the mouse button.



Now only the fields you want in your form are showing, and you'll have plenty of room to make the form.

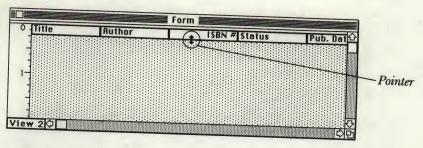
□ Pull down the Form menu and select List Helper to remove the check from in front of it.

Now it's time to arrange and size the fields in the form window. Arranging and sizing fields takes some practice, especially if you haven't worked without List Helper before. Don't get frustrated if your form isn't perfect the first time you try. Just keep changing the sizes and positions of the fields until you get a form that you like and that will work for you. Designing non-List Helper forms is a bit time-consuming, but doing so is a one-time process. Once you have a form you like, you can save it.

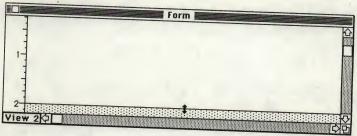
First, make the form longer by dragging the hide area down.

- □ Scroll the form window all the way up and all the way to the left.
- □ Put the mouse pointer on the line between the hide area and the bottoms of the fields.

□ When the pointer looks like this:



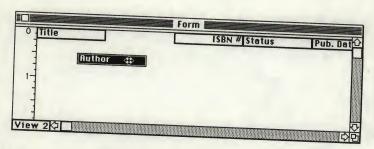
hold down the mouse button and drag the hide area down to the 2-inch mark on the left of the screen. Release the mouse button.



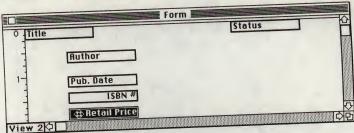
If the List Helper command still had a check mark in front of it, all you would have accomplished was to make each of the visible fields 2 inches high.

Next, you need to line up the left column of fields (Title, Author, Pub Date, ISBN #, and Retail Price). The easiest way to do this is to first line up these fields under Title, and then size them and drag them into position.

- □ Scroll to the top of the form window.
- □ Drag the Author field under the Title field so that the screen looks like this:



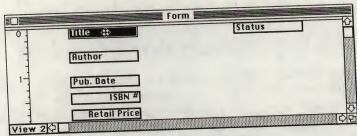
 One at a time, drag the Pub. Date, ISBN #, and Retail Price fields under the Author field. Your form window now looks like this:



The fields were entered in a different order than the order you need to select them. The fields aren't in the order in which you need to select them because the fields in the view 1 form were set up to correspond to the columns in the Multiplan worksheet.

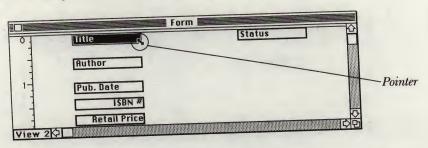
Now you need to move the Title field to the right so that it lines up with the fields below.

□ Drag the Title field ¾ inch to the right.

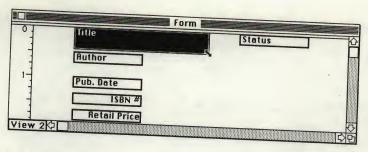


Next, make each of these fields larger by dragging the lower right corner.

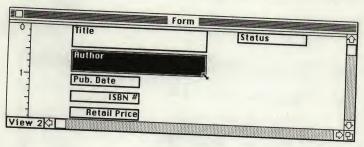
- □ Position the mouse on the lower right corner of the Title field.
- ☐ When the pointer looks like this:



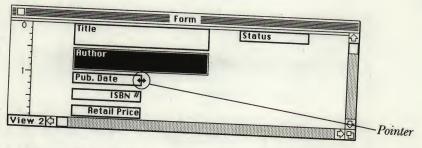
drag the field box down and to the right until it is almost twice as wide as when you started dragging and there is only a very small space between the bottom of the Title field and the top of the Author field. Release the mouse button.



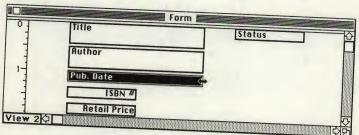
□ Enlarge the Author field the same way. Position the mouse pointer on the lower right corner and drag it down and right until it is as long as the Title field and there is only a very small space between the bottom of the Author field and the top of the Pub. Date field.



□ Position the mouse pointer on the right edge of the Pub. Date field. When the mouse pointer looks like this:

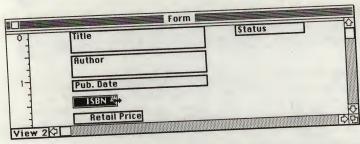


hold the mouse button down and drag it to the right until it is as long as the Title and Author fields. Release the mouse button.

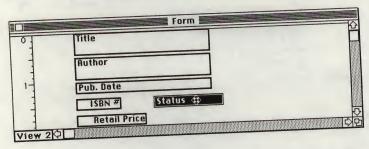


# Next, to shorten the ISBN # field:

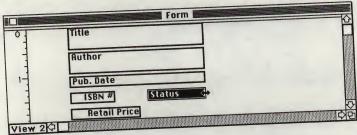
□ Position the pointer on the right side of the ISBN # field, hold down the mouse button, and drag to the left until the field is just over half its original length. Release the mouse button.



□ Select the Status field and line it up to the right of the ISBN # field.



Shorten the Status field so its right edge lines up with the right edge of the Pub. Date field.



Next, add a label to the left of each of these fields. When you make a form without List Helper, there is no way of identifying the text in a field in the data-file window to tell you which field it is. So you need to add labels.

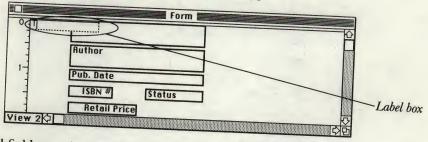
To add a label for the Title field:

□ Click in the white space to the left of the Title field.

A blinking vertical bar appears where you clicked, waiting for you to type the label text.

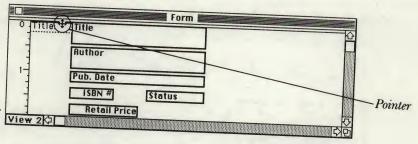
☐ Type Title: as the title.

As soon as you begin typing, you'll see a label box appear.



Label fields are sized and moved just like regular fields.

□ Size the label field by dragging the right edge to the left so it doesn't overlap the Title field. If you need to move it to position it, simply position the mouse pointer on the small bar on top of it, hold down the mouse button, and drag it to where you want it.



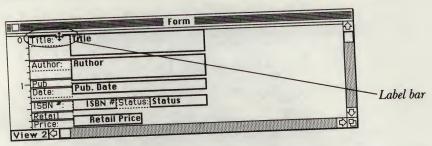
- □ Add a label to the left of each of the rest of the fields in your form (Author, Pub. Date, ISBN #, Status, and Retail Price) by clicking in the space beside the field, and typing the title.
- $\hfill\square$  Move and size the labels so that your form window looks like this:

O Title: 1	Form	
Author: A	uthor	
Pub Date: P	ub. Date	
ISBN ::	ISBN # Status: Status	
Price:	Retail Price	

Note that the labels for the Pub. Date and Retail Price fields are actually two label fields, with the bottom field partially overlapping the top field. Without List Helper, File will allow you to overlap both label fields and regular fields.

I changed the font size of the labels in my example so they'd fit in a smaller space. To change the font size:

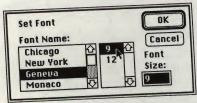
 $\hfill\Box$  Select the Title label box by clicking in the bar at the top.



Hold down the Shift key and click in the bars at the tops of the rest of the label boxes to select them.

Holding down the Shift key when you click allows you to select more than one item at a time. When you have overlapping fields as in this example, always select the bottom field first. Otherwise, the top field will cover the small bar at the top of the bottom field, and when you try to select it, you'll "deselect" all the fields you've selected so far.

- □ Choose the Set Font... command from the Form menu.
- □ When the dialog box appears, click on the 9 in the font size list box to change the font from the default 12-point size to 9-point.

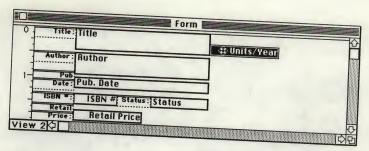


Notice that the default font (as indicated by the highlighted name in the Font Name list box) is Geneva.

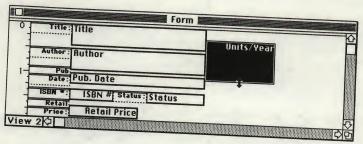
□ Click OK.

Small type is easier to read when it's boldfaced. Also, labels are easier to read when they're right-aligned. You can make both of these formatting changes now.

- □ While the labels are still selected, choose the Format Text... command from the Form menu. When the dialog box appears, click the Bold box in the Style list box and the Right button in the Align list box. Then click the OK button.
- □ Now drag the Units/Year field up and position it beside the Title field.



□ Position the mouse pointer on the bottom edge of the Units/Year field and drag it down until it is about an inch long.



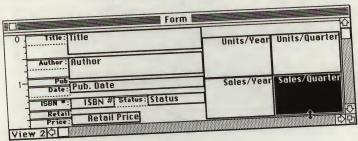
□ Drag the Sales/Year field up and position it directly underneath Units/Year. Drag the bottom edge of the Sales/Year field down until it is about an inch long.

O Title: Title			
Author: Autho	r	Units/Year	
Date: Pub. D		Sales/Year	
	# Status: Status		
Price: Ret	ail Price		

□ Position the Units/Quarter field directly alongside the Units/Year field. Drag the bottom edge of the Units/Quarter field down until it is as long as the Units/Year field. If necessary, drag it right to widen it so the form is exactly the same width as the screen.

O Title: Title	
Author: Author	Units/Year Units/Quarter
Pub. Date	
ISBN # Status: Status	Sales/Year
Price: Retail Price	

 Position and size the Sales/Quarter field just as you did the Units/Quarter field.



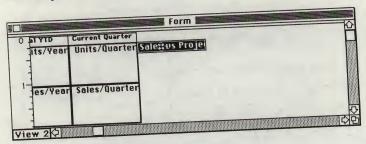
Add the label Fiscal YTD above the Units/Year field.

- □ Click in the space above Units/Year and type *Fiscal YTD* as the label text.
- □ Click in the space above the Units/Quarter field and type *Current Quarter* as the label text.
- □ Select the two label boxes and choose Format Text... from the Form menu. When the dialog box appears, click the Bold and Border boxes in the Style column to make the label text boldfaced and bordered, then click the Center button in the Align box to center the text within the label. Click the OK button.

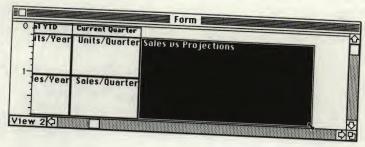
O Title: Title	Fiscal YTD Units/Year	Units/Quarter
Author: Author		-
Pub. Date	Sales/Year	Sales/Quarter
ISBN * ISBN # Status: Status  Retail Price: Retail Price		

The last steps for this form are to move and size the Sales vs Projections picture field and add a label.

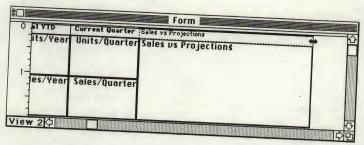
Select the Sales vs Projections field and move it alongside the current quarter fields.



□ Size the Sales vs Projections field so that it looks like this:



□ Click an insertion point above the Sales vs Projections field, type Sales vs Projections as the label text, and size this new label so its size matches the Sales vs Projections field below.



☐ Choose the Format Text... command from the Form menu. When the dialog box appears, click the Bold box to make the label bold, click the Center button to center the label text, click the Border box to put a border around the label, then click OK.

Now you only have a couple of cosmetic changes left. Make some of the field information boldface, add the dollar format to the number fields that display dollars, and eliminate borders from the left column of fields.

- □ Scroll the form window all the way to the left.
- □ Click in the Units/Year field.
- □ Hold down the Shift key and click in the Units/Quarter field.
- □ Choose Format Number Field... from the Form menu. When the dialog box appears, click the Center button in the Align column, and click the Bold box in the Style column.
- □ Click OK.
- ☐ Click in the Sales/Year field.
- □ Hold down the Shift key and click in the Sales/Quarter field.

- □ Choose Format Number Field... again from the Form menu. Click the Dollar button in the Display column to format the field for dollar display, click the Center button in the Align column to center the information in the field, and click the Bold box in the Style column.
- □ Click OK.

## To make the book title bold:

□ Click on the Title field to select it. Choose Format Text Field... from the Form menu. When the dialog box appears, click the Bold box in the Style column and click OK.

#### To eliminate borders:

□ Hold down the Shift key and click in the following fields to select them:

> Author Pub Date ISBN # Status Retail Price

□ Choose the Format Field... command from the Form menu.

## You'll see a dialog box.

- $\hfill\square$  In the Style column, click the Border box to remove the check from it and click the Underline box to put a check in it.
- □ Click the OK button.
- □ Click anywhere in the form window to deselect the selected fields.
- □ Double-click on the Retail Price field.
- □ In the dialog box, click the Dollar button in the Display column, then click the Center button in the Align column.
- □ Click OK.

Now you've finished the hard part—designing and formatting a non-List Helper form. To be sure you won't have to make this form from scratch again, be sure to save it.

□ Choose Save Form As... from the File menu and type Second Quarter Form as its name, then press Return.

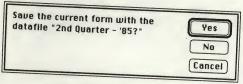
That way, in addition to saving it with the Second Quarter datafile, File will also save another copy on disk as insurance in case you accidentally change the form or delete the file.

### Making the transfer

Now that both forms (the form you'll use to transfer information from Multiplan and the form you'll use to display this information in a useful way) are ready, you can copy information in from your Multiplan worksheet.

□ Quit File by choosing Quit from the File menu.

File may present you with a dialog box, asking if you want to save the current form with the datafile 2nd Quarter - '85.



- ☐ If File displays a dialog box, click Yes to save view 1 and view 2.
- ☐ On the Macintosh desktop, click on the File Master disk icon to select it, then choose Eject from the File menu.

If the Multiplan worksheet you want to use is saved on a different data disk, you need to eject the data disk in the external drive, too.

- ☐ Insert your Multiplan disk and, if necessary, the data disk with the worksheet you want to use.
- □ Double-click on the Multiplan sales worksheet icon (in our example, December 1985).
- □ Select the cells to transfer to File (from the first book title in Column 1 to the Net Dollars column under Current Fiscal YTD) by dragging the mouse pointer over them, starting at the upper left cell you want to select and working down and right to the lower right cell you want to select.

	ivial Accompl		A		
25	D	ecember -	1985		
	26	27	28	29	3
Quarter to	Date				
Dollars	Returns		Current	Fiscal YTD	
			Net Units	Net Dollars	Net Re
\$6,833.33	40		The state of the s	:	
\$2,054.00	10		3,054	\$13,666.65	
\$0.00	0		2,095	\$4,137.63	
\$27,659.70	20		0	\$0.00	
\$8,806.80	10		10,104		
\$81,944.63	30		3,936		
			16,430	\$163, 19.25	
\$127,298.45	110	TOTAL	75 040		
			35,619	\$254,626.53	

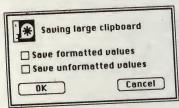
Select only the actual information, not the column titles or totals.

□ Choose Copy from the Edit menu.

Multiplan copies the selected rows and columns into the Clipboard.

□ Quit Multiplan by choosing Quit from the File menu.

After you choose the Quit command, you see a dialog box that asks you if you want to save the information you copied to the Clipboard.



- ☐ Click the Save Unformatted Values box because File will format this information when you load it into File.
- □ Click the OK button.
- ☐ On the Macintosh desktop, click on the Multiplan Master disk icon to select it.
- ☐ Choose Eject from the File menu.

If your File data is on another disk, eject the Multiplan data disk, too.

- ☐ Insert your File Master disk and, if necessary, your File data disk.
- □ Double-click on the 2nd Quarter '85 icon to open that datafile and begin File.

Be sure the List Helper form you created for transferring information (View 1) is displayed. If the non-List Helper form is on the screen, double-click in the New box and you'll get the first form.

- ☐ If it isn't already selected, click on the word New to select the entire new record.
- □ Pull down the Edit menu and choose Paste.

1 2 3 4 5 6 Nev	Title Trivial Accomp In Search of Mel Thinner Hair in Drawing on the Technobabble D Coming of Age	C.B. Fidler L. Matthews C.P. Parsons J.K. Hinsch	55,908 33,921 36,638 89,480	shipping shipping not yet publ shipping shipping shipping	Pub. 04 Apr 12, Aug 12, Apr 1, 19 Dec 31, Oct 15, 1 Feb 16, 1
-----------------------------------	---	--	--------------------------------------	---	---

File copies information from the Clipboard and pastes it into the datafile, starting at the new record.

□ Now double-click on any record number at the left edge of the

1	7itle: Trivial Accomplishments		- Charles Silver
<b>€</b>	recompilishments	Fiscal YTD	Current Quarte
٠	Author: S. Ashenfelter	3,054	1,527
	Pub Date: Apr 12, 1984		
	ISBN 8: 34,096 Status: shipping	\$13,666.65	\$6,833.33
	Retail Price: \$8.95		
2	Title: In Search of Mediocrity	Fiscal YTD	Current Quarter
	Author: C.B. Fidler	2,095	1,040
	Pub Date: Aug 12, 1979		
	ISBN *: 55,908 Status: shipping	\$4,137.63	\$2,054.00
6K	Price: \$3.95		

The form changes to the one you want to use to display the information.

This form, with its small labels and boldface text, displays the information in a useful way. But it will be more visual when the graph from Chart is added.

The information that will make up the graph comes from the Multiplan worksheet that contains the 1985 sales forecast figures. You will need to look at that worksheet and copy forecasted and actual data for each book to Chart and make a graph for each book.

# The Multiplan Forecast

The forecast is on another Multiplan worksheet that contains the forecast for the current year. At the end of each month, Larry Lightfoot uses the Clipboard to copy the number of books sold from the sales worksheet into the forecast worksheet where he can then compare actual to forecasted sales. His completed forecast worksheet is shown in Figure 10-10.

- Quit File by choosing Quit from the File menu.
- □ On the Macintosh desktop, click on the File Master disk icon to select it, then choose Eject from the File menu.
- $\hfill\square$  Take out the File disk, insert the Multiplan disk, and double-click on the Multiplan icon to load Multiplan.
- □ Follow the disk-swapping prompts on the screen.
- □ Create and save a Multiplan worksheet containing forecast figures.
- □ Copy actual sales information from your sales worksheet into your forecast worksheet.

Figure 10-10. A sample Multiplan forecast worksheet

		2	3	4	5	6	7	
I	1	-					September	
		July	July	August	August	September	Actual	
		Forecast	Actual	Forecast	Actual	Forecast 512		
		500		465		400		
	Trivial Accomplishments	300	.,	300				
	In Search of Mediocrity	0		0		1800		
	Thinner Hair in 30 Days	1500		1500		850		
	Drawing on the Right Side	600		600				
	le	2500		2500		3000		
	Coming of Age in Silicon Valley					6562		
0		5400		5365				
1	TOTALS:							
2								
3								
4								
5								
6		• • • • • • • • • • • • • • • • • • • •						
7			1		.1			
8		·!·····						
9								
20								
2 1								
22								
23								
2.		••••••••						
2:								
21								
2								
2	В	·						

				Forecast -	1985			
			10	11	12	13	14	15
	8	9						
1			November	November	December	December		
2	October	October	Forecast	Actual	Forecast	Actual		
3	Forecast	Actual	577	350	600	375		
4	550	350		131	450	201		
5	400	211	450 0	0	0	0		
6	0	0		1657	2200	2380		
7	2000	1015	2200 900	568	950	1000		
8	900	400		2415	2200	3700		
9	2500	2100	2200					
10				5121	6400	7656		
11	6350	4076	6327			1		
12					• • • • • • • • • • • • • • • • • • • •			
13								
14	1	1			• • • • • • • • • • • • • • • • • • • •			
15	1							
16								
17	<b></b>							
18								
19	<b></b>							
20						••••		
21								
22								
23								
		• • • • • • • • • • • • • • • • • • • •						
24								
25		••••	••••				••••	
26		:					••••	
2		:					·	

## **Making Charts from the Forecast Worksheet Information**

You have all the information for the graphs in your forecast worksheet, but you need to rearrange it so you can copy it into Chart without having to enter any of the figures manually. So, first you need to rearrange the forecast so you can use it with Chart. Then load Switcher, your Multiplan forecast worksheet, and Chart. Using Switcher will allow you to switch back and forth between the forecast worksheet and the Chart program with minimal effort, while making a graph for each book.

You don't have to create a whole new worksheet to rearrange the forecast information; you can make a small "worksheet" within your forecast worksheet below the information you've already entered. This worksheet won't be visible when you work with the forecast part of the information, and it's easier to copy information to another place on the same worksheet than it is to copy to a different worksheet. The printed forecast worksheet will look like Figure 10-11 once you've rearranged the forecast information.

To set up a worksheet within a worksheet:

☐ In your forecast worksheet, select the column with the book titles. Select all the titles, the blank row, and the last row (TOTALS:).

	Trivial Accomplis				
	Fo	recast - 198	5		nego serie
1		2	3	4	
2	***************************************				
3	***************************************	July	July	August	Α.
Trivial A	Accomplishments	Forecast	Actual	Forecast	ΑΑ
In Searc	h of Mediocrity	500	415	465	
Thinner	Hair in 30 Days	300	300	300	• • • • • • •
Drawing	on the Right Side	0	0	0	
Technob	abble Dictionary	1500	1227	1500	•••••
Coming	of Age in Silicon Valley	600	550	600	• • • • • • •
)	ac in Silicon Valle	2500	3112	2500	• • • • • • •
TOTALS:	<b>4</b>				• • • • • • •
		5400	5604	5365	• • • • • • • •
					•••••
				***************************************	• • • • • •
			***************************************		

- □ Choose Copy from the Edit menu to copy the selected information
- ☐ Use the vertical scroll bar to scroll down to row 22.

Figure 10-11. Part of the forecast worksheet showing the rearranged forecast information

21 FORECAST

22 Trivial Accomplishments
23 in Search of Medicerity
24 Thinner Hair in 30 Bays
25 Drawing on the Right Side...
26 Techobabble Dictionary
27 Complete of Age in Silicon Vall

27 Coming of Age in Silicon Valley
28

Trivial Accomplishments In Search of Mediocrity 8 Thinner Hair in 30 Days 7 Drawing on the Right Side...
8 Techobabble Dictionary Coming of Age in Silicon Valley

	3	4	5	6	7
2	3				
		August	August	September	September
July	July	Forecast	Actual	Forecast	Actual
ecast	Actual	465	500	512	400
500	415	300	290	400	465
300	300		0	0	0
0	0	0	1582	1800	2243
1500	1227	1500	625	850	793
600	550	600		3000	2540
2500	3112	2500	2583		
				6562	6441
5400	5604	5365	5560	6502	
5400					

0

0

950

0

con					ū
con	Z	ш	и	e	L

Forecast - 1985

0

600

					5	6	7
		2	3		6350	6327 :	6400
		5400 :	5365	6562			
29	TOTALS:	•••••					
30	**					350	375
31	ACTUALS	415	500	400	350		201
32	Trivial Accomplishments	300	290	465	211	131	
33	In Search of Mediocrity		0	0	0	0	
34	Thinner Hair in 30 Days	0	1582	2243	1015	1857	2380
35	Drawing on the Right Side	1227	625	793	400	568	1000
_	Tachahabhle Dictionary	550		2540	2100	2415	3700
36	Coming of Age in Silicon Valley	3112	2583				
37	Coming of the			6441	4078	5121	7658
38		5604	5580				
39	TOTALS:						
40							
41							
42							
43	T						
44							
4							
41						1	
4					• • • • • • • • • • • • • • • • • • • •		
4						••••••••	1
4	***************************************		İ			••••••••	
5				.i			
5		::					
5	2	••••••	:	1			
5	3						
5	4		• • • • • • • • • • • • • • • • • • • •				
	5						
	6	:	·				

□ Move the mouse pointer to the upper left corner of the cell at the intersection of row 22 and column 1, and click.

2	7		
		4	
	•••••		
			Point

Notice the cross in the corner of the cell you just selected. This cross indicates the place where the next action you specify will occur.

☐ Choose Paste from the Edit menu.

Your list of titles appears, starting at row 22.

		Forecast - 198	5		*********
20	1	2	3	4	
1					
2 Trivial	Accomplishments				
	Accomplishments		***************************************	•••••••	
	ch of Mediocrity		• • • • • • • • • • • • • • • • • • • •	••••••••••	
5 Drawing	Hair in 30 Days				
	g on the Right Side				
lechnol	babble Dictionary	••••••••••••			
Coming	of Age in Silicon Vall	ev			
0		×4			
9 TOTALS	:				
0		••••			
				• • • • • • • • • • • • • • • • • • • •	
2				•••••••••••••••••••••••••••••••••••••••	•••••
3				•••••••••••••••••••••••••••••••••••••••	
H	***************************************		•••••••••••••••••••••••••••••••••••••••		

These are the titles for the projected sales information. Now you need another group of titles for the actual sales information.

□ Click in the upper left corner of the cell at row 32, column 1.

Again you'll see a cross in the upper left corner.

□ Again choose Paste from the Edit menu.

The titles are copied in a second time, this time starting at row 32.

Now add some column headings to make it easier to find your place when you copy in information.

- □ Select row 21, column 1 and press the Caps Lock key. Type *FORECAST* as the heading text.
- $\square$  Select row 31, column 1 and type ACTUALS as the heading text.

Now add month numbers to serve as markers.

- □ Select row 21, column 2 and type 7 (for July).
- $\hfill\Box$  Select row 21, column 3 and type 8 (for August).
- □ Continue adding the numbers of months through December (at row 21 and column 7).

Now the space is set up. The next step is to copy information from the top of the forecast worksheet into this new area. To do this, use the Clipboard the same way you did when you copied in the titles.

☐ Use the vertical scroll bar to move back up to the original forecast and select the July forecast figures.

R4C2 500	cast - 1985			
Fore	2	3	4	<u></u>
Trivial Accomplishments To Search of Medicarity Thinner Hair in 30 Days Trawing on the Right Side. Technobabble Dictionary Coming of Age in Silicon Valley		July Actual 415 300 0 1227 550 3112	August Forecast 465 300 0 1500 600 2500	Au
10 11 TOTALS: 12 13 14	争5400	5604	5365	

□ Choose Copy from the Edit menu.

The July forecast is copied to the Clipboard.

□ Scroll to row 22, move the pointer to the upper left corner of the cell at the intersection of row 22 and column 2, and click.

You'll see a cross in the upper left corner of that cell.

□ Choose Paste from the Edit menu.

The July forecast is copied in.

□ Scroll back up to the original forecast and select the actual-sales information for July (rows 4 through 11 of column 3).

- □ Choose Copy from the Edit menu to copy it to the Clipboard.
- □ Scroll to row 32, move the mouse pointer to the upper left corner of the cell at row 32, column 2, and click.
- □ When you see the cross, choose Paste from the Edit menu to copy in the actual figures for July.
- □ Continue these steps to copy the projected and actual figures for the rest of the year from the top forecast into this new space.

When you're finished, the worksheet should look like the one already shown in Figure 10-11 when it's printed.

Now you need to arrange the information to transfer to Chart in two contiguous rows for each book. So, your next step is to take each of the rows in the ACTUALS group and move it up just below its corresponding title in the FORECAST group. Since most of both groups can be viewed on the screen at the same time, this is easy to do.

- □ Click on the row number for row 32 to select the entire row.
- $\hfill\Box$  Choose Copy from the Edit menu to copy the row to the Clipboard.

You could use Cut rather than Copy to copy the information to the Clipboard. But since Cut would delete the row from the Actual section, it is safer to use Copy. Using Copy, if you later realize you've made a mistake, you can go back and restore the original version without having to reconstruct it from the forecast at the top of the worksheet.

□ Move the mouse pointer to the cell at row 23, column 1 and click in the upper left corner.

You'll see a paste cross just as before.

☐ Choose Paste from the Edit menu.

The Actual numbers for the first book (in our example, *Trivial Accomplishments*) are pasted just below the Projected figures, and the rest of the book information is moved down one row.

 Continue selecting one row at a time from the actual information, copying it to the Clipboard, and pasting it beneath its corresponding row in the projected area.

When you're finished, rows 22-33 of your worksheet will look like the worksheet in Figure 10-12.

Figure 10-12. A printout of a section of a Multiplan worksheet containing projected and actual sales figures

Forecast - 1985

			4	5	6	7
	2	3	•	750	350	375
	415 :	500 :	400 :	350		45
Trivial Accomplishments		300	400	400 :	450	
In Search of Mediocrity	300		465	211	131	20
- diameter and a second and the second as a second as	300	290			0	
	0	0	0 :			
Thinner Hair in 30 Days		0	0 :	0 :		220
Thinner Hair in 30 Days	1500	1500	1800	2000	2200	220
B Drawing on the Right Side						

continued

Forecast - 1985

			4	5	6	7
1	2	1582	2243	1015	1657	2380
9 Drawing on the Right Side	1227	600	850	900	900	95
Technobabble Dictionary	600 550	625	793	400	568	100
Technobabble Dictionary		2500	3000	2500	2200	220
2 Coming of Age in Silicon Valley		2563	2540	2100	2415	370
3 Coming of Age in Silicon Valley:	3112 .					

Now you're ready to transfer this information to Chart and make a graph for each book displaying actual versus projected sales for the current fiscal year.

#### **Using Switcher**

Because you'll have to do several transfers between Multiplan and Chart, this is a good time to use Switcher. Using Switcher will eliminate your having to load either Multiplan or Chart each time you need to switch between them.

If you don't have Switcher, you can still transfer this information by using the Clipboard, as you did when you transferred information from Multiplan to File. Instead of switching from one application to the next, you'll have to copy the information to the Clipboard, quit the first application, load the second, and then paste in the information and continue the task. What Switcher actually does is make this quitting and loading unnecessary.

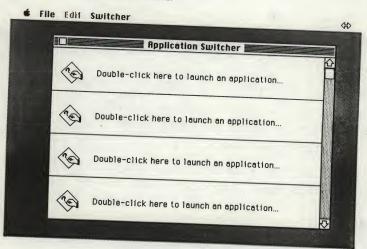
Before you use Switcher, first save your worksheet and quit Multiplan.

- ☐ Choose Quit from the File menu.
- □ When Multiplan asks if you want to save changes to the worksheet, click the Yes button.
- □ If you haven't named your worksheet before with the Save As... command, name the worksheet in the dialog box that appears, then click the Save button.
- □ When you get the dialog box asking if you want to save the Clipboard information, click to remove the Xs from both boxes and click the OK button.

Removing the Xs from both boxes tells Multiplan you don't want to save any of the information in the Clipboard.

□ Insert your Switcher disk in the internal drive and double-click on the Switcher icon.

You'll see Switcher's main screen.



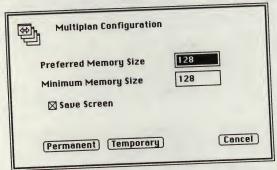
Because you'll be using Switcher and the Clipboard to transfer information, you first need to set the Switcher option to always transfer, or convert, the Clipboard from one program to the other.

- □ Choose Options... from the Switcher menu.
- $\hfill\Box$  Click the Always Convert Clipboard box and click OK.

To launch the first application:

- □ Click on the icon in the top row. Choose the Configure Then Install... command from the Switcher menu.
- □ Insert your Multiplan disk in the external drive.
- □ Double-click on the word Multiplan to open Multiplan.

Now you'll see a Configuration dialog box.



The Configuration dialog box is where you assign portions of the Mac's internal memory to the applications you want to install. Switcher proposes a number (representing Kilobytes, or K, of memory) in the Preferred Memory Size typing field. You can change this number by just typing a new number (since it's already highlighted). Every application requires a certain amount of memory and it's a good idea to assign a cushion amount for the application to work with. Multiplan's preferred memory allotment is 160K.

- □ Type 160 in the Preferred Memory Size typing field.
- □ Leave 128 as the number in the Minimum Memory Size typing field. Be sure there's a check mark in the Save Screen box.

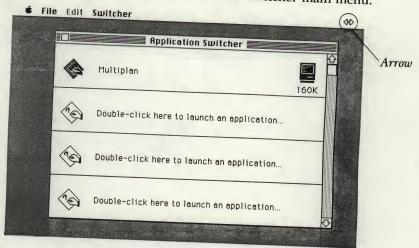
The Save Screen option saves the last screen of an application in memory prior to switching to another application, and makes switching seem a lot faster.

□ Click the Permanent button.

Clicking the Permanent button carries out the Configure Then Install... command and saves the Multiplan configuration information, so that the next time you install Multiplan in Switcher, you won't have to set the Configuration options again.

□ Double-click on the Multiplan icon.

Switcher loads Multiplan, then returns to the Switcher main menu.



Notice the double-pointed arrow in the upper right corner of the screen. If you click on either point of the arrow, it will take you to the next application. Try it now. Since the only application is Multiplan, clicking on the arrow just switches you to Multiplan. When you're satisfied with experimenting, return to the Switcher desktop.

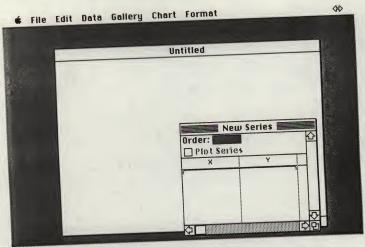
 $\hfill\Box$  Click in the center of the arrow (between the points) to return to the Switcher desktop.

Next configure and install Chart.

- $\hfill\Box$  Click on the icon below the Multiplan icon.
- □ Choose Configure Then Install... from the Switcher menu.
- ☐ Click the Eject button to remove the Multiplan disk, insert the Chart disk, and double-click on Microsoft Chart to open it.
- □ When the Configuration dialog box appears, type *192* in the Preferred Memory Size typing field.
- □ Be sure there's a check mark in front of Save Screen and click the Permanent button to save the Chart configuration.
- □ Double-click on the Microsoft Chart icon.

Switcher loads Chart, then returns you to the Switcher main menu.

□ Click on the left end of the double arrow in the upper right corner of the screen, and the Chart screen will be displayed.

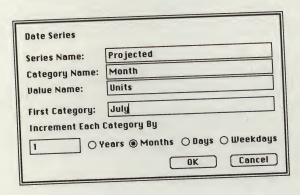


Next, you need to tell Chart what kind of information you want displayed so that it will be copied in the right format. The graph you'll create will display information by month.

☐ Choose Date from the Data menu.

You'll see a dialog box asking for information about the graph you're making.

□ Complete information in the dialog box so it looks like this:



□ Click the OK button.

Now you need to go back to Multiplan, select the information you want for your first graph, and copy it into the Clipboard.

□ Click either point of the Switcher arrow.

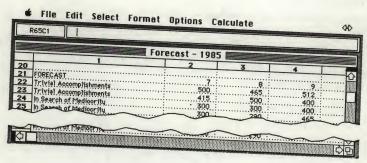
The Chart screen slides to one side as a blank Multiplan worksheet slides in.

First, you need to load your forecast worksheet.

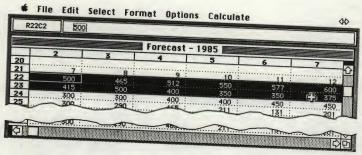
□ Choose Open... from the File menu.

You are prompted to insert your Multiplan Master disk, and, after a short time, a dialog box appears, asking you to select a document.

- ☐ If you saved your forecast worksheet on your Multiplan Master disk, double-click on the name of your forecast worksheet to open it. If it's on another disk, click the Eject button, insert your Multiplan data disk, and double-click on the name of your forecast worksheet.
- $\hfill\square$  When your Multiplan worksheet appears, move to the section where you copied the forecast and actual figures for each book in contiguous rows.



□ Drag the mouse pointer over these figures for the first book (Trivial Accomplishments).



Make sure you select only the forecast and actual figures, not the book title.

- □ Choose Copy from the Edit menu.
- ☐ If your forecast worksheet isn't on your Multiplan Master disk, you'll be prompted to insert the master disk.
- □ Now click either end of the Switcher arrow to return to Chart.

The worksheet slides off the screen and the Chart screen slides back on.

□ When prompted, insert your Chart Master disk.

 Now choose Paste from the Edit menu to copy in the information from Multiplan (forecast and actual figures for the book Trivial Accomplishments).

Chart makes each row of the Multiplan worksheet a separate series. So, the first row is put in the Projected series and, because you only named one series, the second row is put in a series that has the current time as its name. (Whenever a name is not specified, Chart uses the word Series followed by the current time.)

To change the name of the second series (the current active window) from the time to Actual:

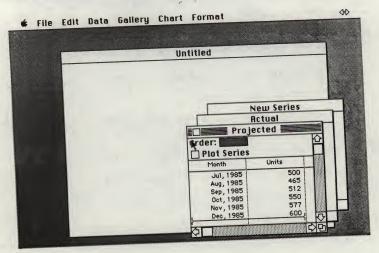
□ Choose Date from the Data menu. When the dialog box appears, type *Actual* as the series name in the Series Name typing field.

Date Series	-
Series Name:	Actual
Category Name:	Month
Value Name:	Units
First Category:	Jul 1, 1985
Increment Each	
1 0	rears  Months Obays Oweekday
	OK Cancel

□ Click the OK button.

Now you want to have Chart plot both of these series. You can see a portion of the Projected box behind the Actual box. Clicking on the Projected box makes it active and it is displayed in front of the other boxes.

□ Click in the Projected window.



□ Now click in the Plot Series box.

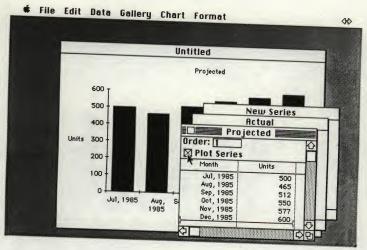
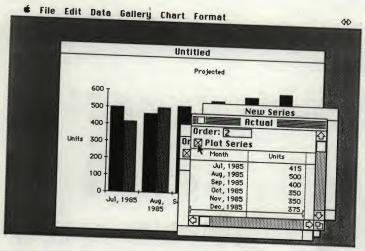


Chart plots the projected sales.

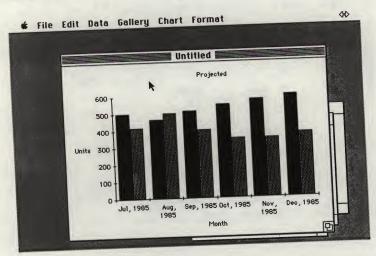
 $\hfill\Box$  Click on the Actual box to make it the active window. Click in the Plot Series box.



Actual sales figures are plotted alongside of the projected figures.

To see the chart without the series information in front:

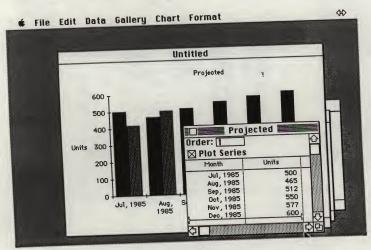
□ Click in the Untitled window.



Now you can make a few cosmetic changes: Remove the year from the months along the X (horizontal) axis, change the Projected title (titles cannot be changed in File or Word, so if you want a different title in your graph, you have to change it in Chart), and add a legend.

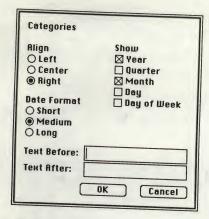
To make the X axis display only the month, not month and year:

□ Click in the Projected window so that it comes to the front.



If you click on one of the boxes behind the chart that is not Projected, just keep trying until you get the Projected series.

□ Choose Categories... from the Format menu.



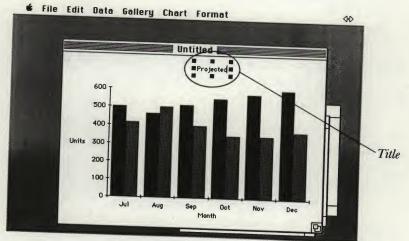
In the Show column, notice the X in front of Year and in front of Month.

□ Click on the X in front of Year to remove it. Click OK.

The chart is redrawn and has only the month rather than the month and year along the X axis.

Chart automatically gives each chart the title of its first series (the one with a 1 in the Order field); that's why this chart showing sales figures for one book has the title Projected. A clearer title would be the book title. So, change the title of the chart.

- □ Click in the Untitled window to make it active.
- □ Move the mouse pointer to the title Projected and click on it.



You'll see a selection box consisting of small, black squares surrounding the title and a blinking vertical bar after the d of Projected.

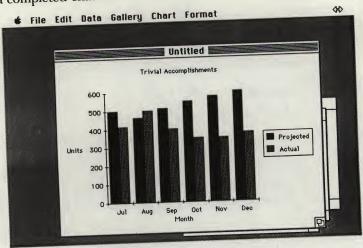
□ Drag over the word Projected, then press the Backspace key to erase it. Type *Trivial Accomplishments* as the new title.

□ Click outside the selection box around the title to have Chart redraw the graph with the new title.

The last step is to add a legend. This is easy. Chart does it for you when you choose the Add Legend command from the Chart menu.

□ Pull down the Chart menu and choose Add Legend.

Your chart is redrawn, making room for the legend that Chart adds for you. You now have a completed chart.



- □ Choose Save As... from the File menu and type *Trivial* as the name of your chart.
- □ If you want to save the chart on a data disk, click the Eject button and insert your data disk.

If there is enough room on your Switcher or Chart disk, you can save the charts on them. This will prevent a lot of disk-swapping.

- □ Click the Save button.
- □ Now click one of the Switcher arrows to go back to Multiplan.
- Copy the next two rows of the realigned forecast and actual data into the Clipboard.
- ☐ Use a Switcher arrow to switch to Chart.
- □ Click on the New Series window to make it active.
- □ Choose New Data from the File menu to reset Chart for the new information. Click the No button when the dialog box appears, asking if you want to save the changes.
- □ Follow the same steps you used to create the graph for the first book to make charts for the rest of the books in the list (except *Thinner Hair in 30 Days*, which is not yet published, so it has no projected or actual sales).

We'll save these charts using the names Drawing for the Drawing on the Right Side of your Mac chart, Silicon for Coming of Age in Silicon Valley, Trivial for Trivial Accomplishments, Mediocrity for In Search of Mediocrity, and Dictionary for Technobabble Dictionary.

### **Adding Charts to File**

Once you've made a chart for each book, you can copy these charts into File. If you're using Switcher, add File to Switcher so the process will be quick and easy. Then use the Clipboard and copy them in one by one.

Switcher can usually only work with two large applications at a time. If applications have fairly large preferred-memory requirements, there really isn't room for more than two applications, Switcher, and the System files. So, since you'll be transferring information between Chart and File (two large applications), you have to quit Multiplan and add File to Switcher.

- $\hfill\Box$  Use the Switcher arrows to switch to your Multiplan worksheet.
- ☐ Choose Quit from the File menu.

Notice that when you quit an application, you are returned to the Switcher desktop, and the application is no longer part of Switcher.

To add File to Switcher:

□ Double-click on a "Double-click here to load an application" icon.

At this point, there isn't enough memory remaining to specify File's preferred memory allotment (288K), so you simply accept the minimum memory requirement by double-clicking the "Double-click here to load an application" icon.

 $\square$  If the Switcher list box is displayed, click the Drive button so that the Multiplan Master list box is displayed. Click the Eject button, and insert your File disk. Then double-click on Microsoft File to load it.

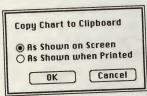
After the program loads, you are returned to the Switcher main menu.

- □ Click on one end of the double arrow in the upper right corner until the opening File screen is displayed.
- □ When you see the File dialog box asking which datafile you want to load, click the Eject button and insert your File data disk.
- □ Double-click on 2nd Quarter '85 to load it.
- $\square$  If the 2nd Quarter '85 datafile opens with the List Helper form (view 1) displayed, double-click on any record number to get the view 2 form, the one you want to use.

Now you need to return to Chart, pick up a chart for one of the books and copy it to the Clipboard, switch back to File, and then paste it into the appropriate record.

- ☐ Use the Switcher arrow to switch to Chart.
- $\hfill\square$  Be sure the main Chart window is active by clicking anywhere in it.
- □ Choose Copy Chart... from the Edit menu.

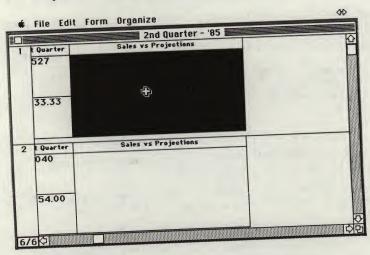
You'll see this dialog box:



□ Click OK to accept Chart's default (As Shown on Screen).

The chart is copied to the Clipboard.

- □ Click on the Switcher arrow to return to File.
- Select the Sales vs Projections field for the book whose chart is in the Clipboard by clicking anywhere in the field.

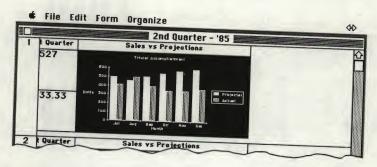


□ Now choose Paste from the Edit menu to copy your chart in.

Note that the chart doesn't fit the field.

To adjust the chart to fit:

- □ Choose Format Picture Field... from the Form menu.
- $\hfill\Box$  In the dialog box, click the Scale button in the Display column, then click OK.



□ Continue these steps for the chart for each of the other books.

When you're finished, your 2nd Quarter - '85 datafile will look like the printout in Figure 10-13.

The Macintosh has excellent graphic capability, and Chart allows you to make professional-looking graphics, which File can incorporate. With Switcher, transferring information between File and Chart is greatly simplified.

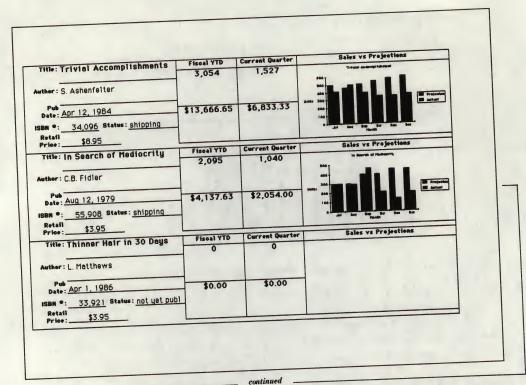
## **Putting It All Together with Word**

Now that you have all this Multiplan, File, and Chart information stored, you can put it all together using Microsoft Word. You'll learn how Larry Lightfoot writes a memo from the marketing department to the acquisitions staff at Fictitious Publishing describing marketing's view of current trends in the publishing industry. One of the finished memos was shown in Figure 10-6.

Larry Lightfoot could write and print out a memo to each member of the Acquisitions Department staff. But since he wants to say the same things to each person, changing only the name of the addressee, he can have Word's print merge feature do this for him automatically.

Print merge, sometimes called mail merge, allows you to create and print a form-letter type of document. To use Word's print merge feature as shown in our example, two separate documents are required—a main document (in this case, the memo) and a merge document (the names and addresses). The main document contains the text that won't vary from printout to printout, and the merge document contains the variable information (the names and addresses) that Word will insert in each copy of the letter or memo when it prints. For our example memo, we'll use a datafile for the names and addresses we want inserted in the letters. You could also create the name and address file (the merge document) in Word.

Figure 10-13. A printout of the 2nd Quarter -'85 datafile



Sales vs Prejections Current Quarter Fiscal YTD Title: Drawing on the Right 5,052 10,104 Side... Author: C.P. Parsons \$27,659.70 Pub Date: Dec 31, 1983 \$55,319.40 ISBN 9: 36,638 Status: shipping Retail Price: \$10.95 Current Quarter Fiseal YTD Title: Technobabble Dictionary 1,968 3,936 Author: J.K. Hinsch \$17,613.60 \$8,806.80 Pub Oct 15, 1983 ISBN \*: 89,480 Status: shipping Retail \$8.95 Current Quarter Price:\_ Fiscal YTD Title: Coming of Age in Silicon 8,215 16,430 Valley Author: C. Henry \$163,889.25 \$81,944.63 Pub Date: Feb 16, 1984 ISBN 9: 914,845 Status: shipping Retail \$19.95

You tell Word where in the main document you want the information from the merge document by using special print merge commands. These commands, as well as the information Word needs to locate the merge document and the information in it, must be enclosed by international quotation marks (« and »). If you printed your main document with the Print... command instead of the Print Merge... command, you would be able to see these commands.

Notice the first line of the document, which reads «DATA Acquisition Personnel». This instruction tells Word to use a merge document called Acquisition Personnel and merge information from it into the memo. The DATA instruction must appear at the start of a main document. Acquisition Personnel contains a list of people in the Acquisitions Department. Larry Lightfoot created the Acquisition Personnel merge document, shown in Figure 10-14, in Microsoft File, then saved it using the Text Output option.

In the "To:" section of the memo, notice «firstname» and «lastname». These are field names in the Acquisition Personnel datafile. When Word sees the «» symbols, it substitutes information from the merge document that matches the field names enclosed in the «» symbols. Field names in the datafile must exactly match those names enclosed in the «» symbols in your Word memo; if there is any variation, Word will print out an error message on the document.

You will need a datafile to serve as your merge document, so copy the Acquisition Personnel datafile that is shown in Figure 10-14 or use one of your own datafiles.

☐ Create a datafile in File to serve as a merge document for a print merge operation in Word.

If your entire staff is in one datafile and you want the memo to go to only part of your staff, you can use File's Hide Records command to hide the records for people you don't want to send the memo to. Then, choose the Save Records As... command, and save your list as a Text Output file to use with Word's print merge capability. Then when you print, Word will pull in names from your list and insert them in the memo.

If you're using Switcher, now is the time to load Word into Switcher. Once again, Switcher works best with two applications. So, before you load Word, you need to quit one of the current applications.

Figure 10-14. A printout of the Acquisition Personnel datafile

	Lastname	Firstname	Street Address				
1	Alexander		11001000		State	Zip	
2	Nesbitt			Redmond	WA	98004	
3	Pennington		6115 Blair St.	Seattle	WA	98105	
	Evavold		4191 Oak Place	Seattle		98105	
-	127010	Frank	712 Campbell	Bellevue		98275	

If you've used File to create your Acquisition Personnel datafile, if the first two fields of each record are Firstname and Lastname, and if you've saved this as a text file, you no longer need File in Switcher.

- ☐ Use the Switcher arrows to go to File.
- □ Choose Quit from the File menu.

When you Quit an application, Switcher automatically removes it and returns you to the Switcher main menu.

Now we're ready to load Word into Switcher.

□ Double-click on an empty Switcher icon.

There isn't enough memory remaining to specify Word's preferred memory allotment (160K), so just double-click on an available Switcher icon to load Word with the minimum memory requirement (128K).

- □ Click the Drive button if necessary to change to the external drive, then click Eject.
- □ Insert your Word Master disk, and double-click on Microsoft Word.

The Switcher should now have Chart and Word.

- □ Click on either end of the Switcher arrow.
- □ When you see Word's startup screen, type the memo shown in Figure 10-15.

The words Drawing, Silicon, Dictionary, Trivial, and Mediocrity are markers for the charts you'll copy into this document later.

Next you need to use the Clipboard and copy in the charts. With Switcher this is not difficult.

To copy in the charts:

- □ Click a Switcher arrow to go to Chart.
- Choose Open from the File menu and, when the dialog box appears, click on the name Drawing to load the chart named Drawing.
- $\hfill\Box$  Click in the window where the chart is displayed to make it active.
- □ Choose Copy Chart from the Edit menu to copy it to the Clipboard.
- □ Click the OK button to choose the default As Shown on Screen option.
- □ Now use a Switcher arrow to return to your Word memo.
- ☐ Find and delete the word Drawing.
- □ Choose Paste from the Edit menu to paste in the Drawing chart at the insertion point.
- □ Follow these steps to copy in the Silicon, Dictionary, Trivial, and Mediocrity charts.

«DATA Acquisition Personnel»

Pictitions Publishing 110 Park Avenue New York, NY 10012

### MEMO

To: «firstname» «lastname» Acquisitions Staff From: Larry Lightfoot Marketing Staff Re: Changing Market Trends

Dear «firstname»,

In preparation for our meeting next week, I thought it might be helpful to let you know the marketing department's perspective on the current book market and how we see it changing.

#### Forecast

Our strong performers over the last quarter have been our scientific and technical books, <u>Drawing on the Right Side of your Mac</u> and <u>Coming of Age in Silicon Valley</u>.

Drawing

Silicon

As you can see, both have met and exceeded our projections and continue to be strong. This is in spite of projections for a weak technical market.

Also, our book, <u>Technobabble Dictionary</u>, continues to sell consistently.

### Dictionary

It falls into the scientific and technical category, but it is different in that it seems to have almost a cult following and has been selling consistently for over two years.

continued

Our business books, <u>Trivial Accomplishments</u> and <u>In Search of Mediocrity</u> are not doing as well as projected.

Trivial

Mediocrity

In light of these figures, it's the recommendation of the marketing department that we place more emphasis on scientific and technical books, but not exclusively. Our newest how-to book, Thinner Hair in 30 Days, has extremely good prepublication sales.

I'm looking forward to talking with you about this at our meeting Tuesday.

Sincerely,

Larry Lightfoot

Next, copy in the Multiplan forecast. To do this, quit Chart, return to the Switcher desktop, and launch Multiplan.

☐ Use a Switcher arrow to switch to Chart and choose Quit from the File menu.

Choosing Quit in Chart removes Chart from Switcher and returns you to the Switcher main menu.

- Double-click on one of the "Double-click here to launch an application..." icons.
- Click the drive button if necessary, then click the Eject button, insert the Multiplan disk in your external drive, and double-click on Multiplan to load it.
- □ Click on either end of the Switcher arrow to get to the Multiplan screen.
- □ Choose Open... from the File menu.
- ☐ If your forecast worksheet is on a data disk, click the Eject button and insert your data disk.
- □ Double-click on Forecast 1985 to load it.

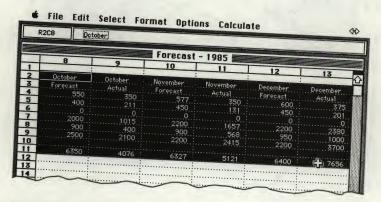
You want to copy information from the forecast for just the second quarter (October through December). To do this, use a small portion of the forecast worksheet as a workspace, use the Clipboard to copy down the book titles, paste them in the workspace, then use the Clipboard to copy the second quarter information and paste it in next to the titles in your workspace. Finally, copy both the titles and the information from your workspace to the Clipboard.

□ Select the book titles (rows 4 through 11 of column 1) in your forecast.

R4C1 Trivial Accomplishmen	Forecast - 1985			
	2	3	4	
	July	July	August	A4
	Forecast	Actual	Forecast	#
- i i i i i i i i i i i i i i i i i i i	500	415	465 300	
Trivial Accomplishments In Search of Mediocrity	300	300		
Thinner Hair in 30 Days	1500	1227	1500	
Drawing on the Right Side	600	550	600	
Technobabble Dictionary	2500	3112	2500	
Coming of Age in Silicon Valley		5604	5365	
TOTALS:	5400			

- □ Choose the Copy command from the Edit menu to copy these to the Clipboard.
- ☐ Use the vertical scroll bar to scroll to an empty area on your worksheet (say, the intersection of row 56 and column 1).

- □ Click in the upper left corner of the cell (for example, at row 56 column I) to select it.
- □ When you see the paste cross, choose Paste from the Edit menu to paste in the book titles from the Clipboard.
- $\square$  Scroll to the top of the forecast worksheet.
- □ Select the Forecast and Actual columns for October through December.



- $\hfill\Box$  Choose Copy from the Edit menu to copy them to the Clipboard.
- □ Scroll to the next column to the right of where you pasted the book titles (row 54, column 2) and click in the upper left corner to select this cell.
- □ Choose Paste from the Edit menu.

Your workspace, with the titles and the October through December forecast, should look like this:

R54C2 October			***************************************	************
	Forecast - 1985			***********
	2	3	4	
	October	October	Blacon	
Trivial Accomplishments	Forecast	Actual	November Forecast	No
In Search of Medinority	550	350	577	A
JUNIONER Hair in 30 Daug	400	211	450	• • • • • • •
JULY WING on the Right Side	O	0		• • • • • • •
J. echnopabble Dictionary		1015	2200	• • • • • • • •
Coming of Age in Silicon Valley	900	400	900	•••••
	2500	2100	2200	
TOTALS:				
		4076	6327	
	• • • • • • • • • • • • • • • • • • • •		:	

R54C1		3	Forecast -	- 1985 <b>-</b> 5	6	7
	october orecast 550 400	October Actual 350 211	November Forecast 577 450	November Actual 350 131	December Forecast 600 450 0	December Actual 375 201 0
58 59 60	0 2000 900 2500	0 1015 400 2100	0 2200 900 2200	1657 568 2415	2200 950 2200 6400	2380 1000 3700
62 63 64 65	6350	4076	6327	5121	6400	
66 67 68						

□ Select the entire second quarter forecast.

□ Copy the selected area to the Clipboard by choosing the Copy command from the Edit menu.

Because you have selected more than 50 cells of information, you will not be able to copy the information directly into Word via the Clipboard. You'll have to paste the information in the Scrapbook, switch to Word, copy the information from the Scrapbook, and paste it into place.

- □ Choose Scrapbook from the Apple menu.
- □ Choose Paste from the Edit menu.
- □ Click the Scrapbook window close box in the upper left corner to close the Scrapbook window.
- ☐ Switch back to Word.
- □ Choose Scrapbook from the Apple menu.
- □ Choose Copy from the Edit menu.
- □ Close the Scrapbook window.
- □ Scroll the memo up until you get to the word Forecast, which is where you want to paste the Multiplan table.
- □ Delete the word Forecast.
- □ Choose Paste from the Edit menu to copy in your second quarter figures.

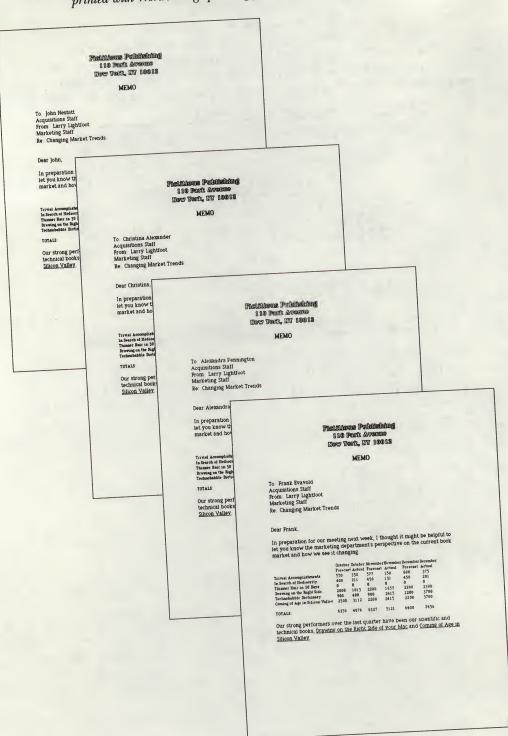
Now you have to format this forecast in Word so that it fits in Word's margins. You can use whatever formatting you wish. For example, because of the width of the forecast, I first selected it and changed the font to 9-point using the Formats... command from the Character menu, the smallest type available. Then I added and deleted tab characters and spaces until the columns lined up.

In preparation for our meeting next week, I thought it might be helpfulet you know the Marketing department's perspective on the current to market and how we see it changing.  October October November November December Forecast Actual For
In preparation for our meeting next week, I thought it might be helpfulet you know the Marketing department's perspective on the current to market and how we see it changing.  October October November November December December Forecast Actual Forecast A
Accomplishments and Actual Forecast Actual
In Search of Hedicority 400 211 450 131 450 201 Drawing on the Right Side 2000 1015 2200 1657 2200 2380 Coming of Age in Silicon Velley 2500 3112 2200 2415 2200 3700 TOTALS: 6350 4076 6327 5121
Our strong performers over the last quarter have been our scientific an echnical books, <u>Drawing on the Right Side of your Mac</u> and <u>Coming of Assistance</u>

That's all there is to creating the memo using information from Multiplan, Chart, and File. You can see it all come together when you actually print the memos, as shown in Figure 10-16. Choose the Print Merge... command from the File menu to begin printing.

Pretty impressive, isn't it.

Figure 10-16. Copies of the Fictitious Publishing memo printed with Word's merge printing feature



# **Appendix**

This appendix shows you how to take a datafile from File, have a BASIC program do some computations on one of the fields, and then bring it back to File. It's not intended to teach you how to program in BASIC. We're assuming that people who read this section are knowledgeable BASIC programmers who want to know how File and BASIC can work together.

File cannot handle conditional statements, such as "if salary is greater than 32,000, then..." But BASIC can. For instance, you can read a datafile saved as text-only information that contains sales information for a group of employees into a BASIC program that assigns a commission based on the range into which a sales figure falls.

2 Guildner, C. \$2,000.00 \$1,000.00 \$350.00 \$3 3 Meagher, R. \$2,000.00 \$850.00 \$200.00 \$3 4 Boersma, M. \$2,000.00 \$1,000.00 \$2	al Pay
2 Guildner, C. \$2,000.00 \$1,000.00 \$350.00 \$3 3 Meagher, R. \$2,000.00 \$975.00 \$200.00 \$2 4 Boersma, M. \$2,000.00 \$1,000.00 \$2	ai ray
Edition C. \$2,000.00 \$850.00 \$200.00 \$3 Meagher, R. \$2,000.00 \$975.00 \$200.00 \$4 Boersma, M. \$2,000.00 \$1,000.00 \$2	750
4 Boersma, M. \$2,000.00 \$975.00 \$200.00 \$2	2,350.00
4 Boersma, M. \$2 000 00 \$1 000 \$2	,200.00
F 1	,200.00
3  Linn. C. \$2,000,00   \$2	,350.00
6 McInture W \$350.001 \$3	,350.00
lew \$2,000.00 \$1,525.00 \$500.00 \$2	,500.00
	,500.00

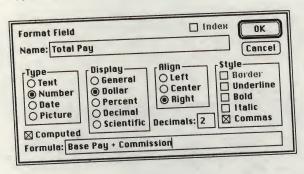
If the sales figure is between \$700 and \$999, a \$200 commission is assigned; if it's between \$1,000 and \$1,499, a \$350 commission is assigned; and if the sales figure is greater than \$1,500, the commission is \$500. The BASIC program looks at the sales figures and assigns the appropriate commissions.

First, you need to create a datafile. Then save it as text-only so the BASIC program can read it. Next, enter the BASIC program, debug it, and run it. Last, load the file the BASIC program produces back into File and check to be sure the computations are correct and all is well.

- □ Load File and open a new datafile named Commission.
- ☐ Enter the following five fields and information types:

Field Name	Information Type
Name	Text
Base Pay	Number
Sales	Number
Commission	Number
Total Pay	Number

- □ Select the Base Pay, Sales, and Commission fields and choose the Format Number Field... command from the Form menu. Click the Dollar button in the Display column.
- □ Double-click on the Total Pay field.
- □ Click the Dollar button in the Display column, click the Computed box, and click an insertion point in the Formula typing field.
- ☐ Type Base Pay + Commission as your formula.



□ Click the OK button.

Total Pay is now a computed number field that adds Base Pay and Commission. That's all there is to creating the commission form. Save it separately so that you can use it when you bring the file with commissions back from BASIC.

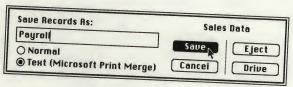
□ Choose Save Form As... from the File menu. Name the form Payroll Form and click the Save button.

Now click in the datafile window to make it active and enter information in all fields except Commission. The Commission field will get its information from the BASIC program. You may enter your own information or simply copy this

1 2 3 4 5 6	Mame McCarthy, K. Guildner, C. Meagher, R. Boersma, M. Linn, C. McIntyre, W.	\$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00	\$1,000.00 \$850.00 \$975.00 \$1,200.00 \$1,125.00	Commission	\$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00
New 6/6	<b>Ģ</b> □		\$1,525.00		\$2,000.00

When you're finished entering information, you need to save this datafile as a text file so BASIC can read it.

- □ Choose the Save Records As... command from the File menu.
- □ Name the records Payroll and click the Text button. Click the Drive button if necessary, then click the Save button.



□ Now quit File, insert your BASIC disk in the internal drive and load Microsoft BASIC(d).

The lowercase d after the word BASIC stands for decimal. You need to use the decimal version of BASIC since you're working with dollars and cents. The decimal version eliminates the round-off error in dollars-and-cents calculations.

□ Enter the program shown in Figure A-1.

You may notice that there is one subroutine, called GetNumber, that is not called by the program. The GetNumber subroutine acts only on unformatted number fields and there are no unformatted number fields in the Payroll datafile. All of the fields in Payroll have the dollar format, and, since BASIC doesn't recognize

the dollar sign as being part of a number, these fields are treated as text. The GetNumber subroutine is included so that you can use this BASIC program with a datafile that contains unformatted number fields.

- ☐ Be sure your disk with the Payroll datafile (saved as text) is in the external drive.
- □ Choose Start from the Run menu to run the program.
- □ When the dialog box appears asking you to choose the name of the file you want the BASIC program to use, click on Payroll and click the Open button.

Your BASIC program will run and will use the Payroll datafile.

Figure A-1. A BASIC program for computing commissions

```
REM This BASIC program, called Pay, reads a Microsoft File text datafile, checks
REM Inis BASIC program, called Pay, reads a Microsoft File text dat REM the Sales field, and assigns a commission based on the sales. REM Commissions are as follows:

REM $700 - $999 = $200

REM $1000 - $1499 = $350

REM $1500+ = $500
REM It puts the proper commission value into the Commission field, and
 REM then writes the datafile to disk where it can be loaded back into File.
                                                                                     'make all variables double-precision
 DEFDBL a-z

REM Read datafile named Payroll; write datafile named Payroll2
filename1$ = FILES$(1, "TEXT")
IF filename1$ = "" THEN STOP
filename2$ = filename1$ + " 2"

OPEN filename1$ FOR INPUT AS #1

OPEN filename2$ EGR CHITBLIT AS #2
  OPEN filename2$ FOR OUTPUT AS #2
   REM The first record consists of field names; discard this record
   LINE INPUT #1, fields$
    WHILE NOT EOF(1)
PRINT "Record #"; r: r = r + 1
        REM Compute current commission
If (sales >= 700) AND (sales <= 999) THEN commission = 200
IF (sales >= 1000) AND (sales <= 1499) THEN commission = 350
IF (sales > 1500) THEN commission = 500
COPUS WINDOWS
         GOSUB WriteRecord
     WEND
      PRINT "Done"
      CLOSE #1
CLOSE #2
      REM Read fields of each record into variables, either string, dollar, or numeric
       ReadRecord:
          eachecord.

CALL GetString(names$)

CALL GetDollar(basepay)

CALL GetDollar(sales)

CALL GetComm(commission)
           REM This is a special procedure for the Commission field, which is empty
            CALL GetDollar(totalpay)
        REM this subroutine writes the records back out in text form
         WriteRecord:
```

continued

continued

```
tabb$ = CHR$(9) : cr$ = CHR$(13)
           CALL PutString(names$): PRINT#2, tabb$;
CALL PutNumber(basepay): PRINT#2, tabb$;
CALL PutNumber(sales): PRINT#2, tabb$;
CALL PutNumber(commission): PRINT#2, tabb$;
CALL PutNumber(totalpay): PRINT#2, cr$;
        RETURN
        SUB GetString(s$) STATIC
CALL GetField(s$)
IF LEFT$(s$, 1) = CHR$(34) THEN s$ = MID$(s$, 2, LEN(s$) - 2)
END SUB
                                                                                                    'take off double quotes
       SUB PutString(s$) STATIC CALL PutField(s$)
       END SUB
       SUB GetDollar(dol) STATIC
         CALL GetField(d$)
CALL CommasOut(d$)
CALL RemoveFirstChar(d$)
      dol = VAL(d$)
END SUB
     SUB GetComm(com) STATIC CALL GetField(dummy$)
      com = 0
                                             'Now procedure will work whether or not field has initial value
     SUB GetNumber(num) STATIC
CALL GetField(n$)
CALL CommasOut(n$)
    num = VAL(n$)
END SUB
    SUB PutNumber(num) STATIC

n$ = STR$(num)

CALL PutField(n$)
   SUB CommasOut(s$) STATIC
     IF LEFT$(s$, 1) <> CHR$(34) GOTO NoCommas
                                                                                   'remove commas from numbers
      s1$ = "
      FOR i = 2 TO LEN(s$) - 1
c$ = MID$(s$, i, 1)
         IF (c$ <> ",") THEN s1$ = s1$ + c$
      NEXT!
  s$ = s1$
NoCommas:
  END SUB
  SUB GetField(f$) STATIC
 SUB GetField(f$) STATIC

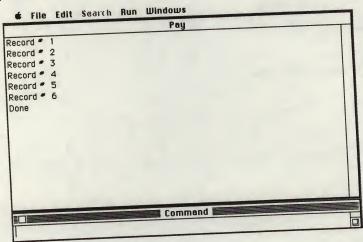
f$ = "": cr$ = CHR$(13) : tabb$ = CHR$(9)

Repeat:
a$ = INPUT$(1, 1)

IF (a$ <> cr$) AND (a$ <> tabb$) THEN f$ = f$ + a$ : GOTO Repeat

END SUB
SUB PutField(f$) STATIC
comma = INSTR(f$, ",")
IF (comma) THEN PRINT#2, CHR$(34);
    PRINT #2, 1$;
IF (comma) THEN PRINT #2, CHR$(34);
SUB RemoveFirstChar(s$) STATIC
s$ = RIGHT$(s$, LEN(s$) - 1)
END SUB
                                                                     'remove dollar signs and double quotes
```

If the program doesn't run correctly, check your listing against the listing here and make the necessary corrections. You'll know the program has run successfully if your screen looks like this:



□ Quit BASIC, put your File disk in the internal drive, start File, and open a new datafile named Payroll 3.

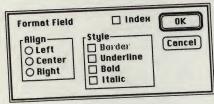
There are a couple of preparations you need to make to get File to read Payroll 2, the datafile with the commissions created by the BASIC program. It's a text file, not a Microsoft File file, so you can't just load it from the Macintosh desktop. You need to open a new datafile, load Payroll Form, format all the fields in Payroll Form, and then open the Payroll 2 file created by the BASIC program.

- ☐ Type Commissions 2 as the name of your new datafile.
- □ Choose the Open Form... command from the File menu.
- □ Double-click on Payroll Form to load it.

You'll note that most of the fields in the form are gray. File uses gray fields to indicate fields that are in the form but not in the datafile. To add these fields to the datafile, all you need to do is format them.

- □ Choose Select All from the Edit menu.
- □ Choose Format Field... from the Form menu.

You'll see a dialog box that looks like this:

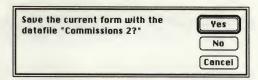


☐ Simply click the OK button and the gray fields will be added to the Payroll 3 datafile.

Now all that's left is to open the Payroll 2 file.

- Click in the datafile window to make it active and to close the form window.
- □ Choose Open Datafile... from the File menu.

You'll see this dialog box:



- □ Click the Yes button.
- □ Double-click on the file Payroll 2.

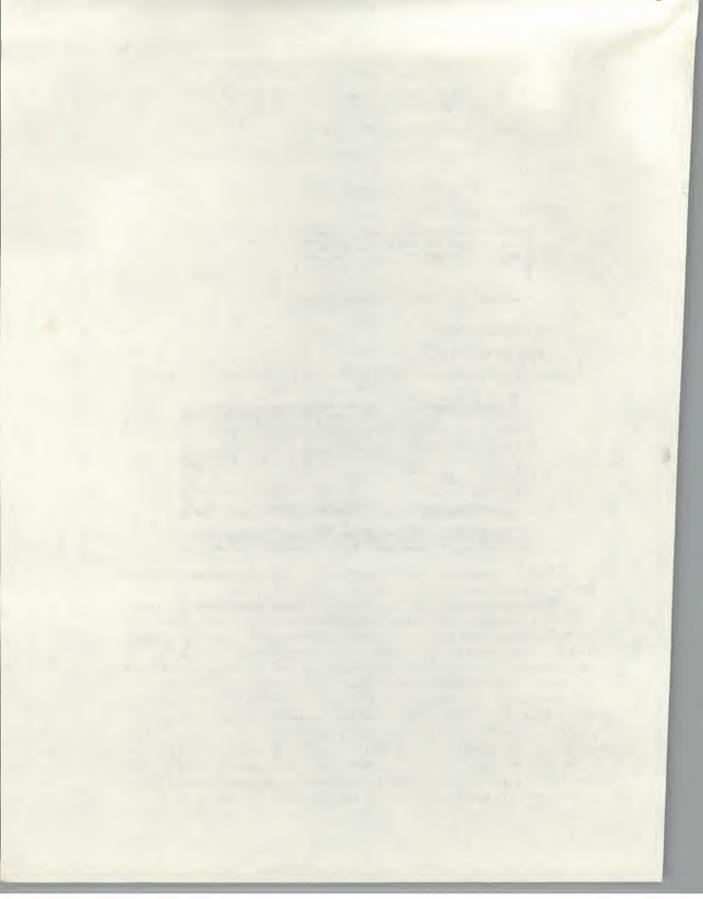
Information from Payroll 2 should be on your screen and should look like this:

1         McCarthy, K.         \$2,000.00         \$1,000.00         \$350.00         \$2,35           2         Guildner, C.         \$2,000.00         \$850.00         \$200.00         \$2,20           3         Meagher, R.         \$2,000.00         \$975.00         \$200.00         \$2,20           4         Boersma, M.         \$2,000.00         \$1,200.00         \$350.00         \$2,35           5         Linn, C.         \$2,000.00         \$1,125.00         \$350.00         \$2,35           6         McIntyre, W.         \$2,000.00         \$1,525.00         \$500.00         \$2,50	au k	Total Pau	Commission	nmissions 2 Sales	Base Pau	Name	
2     Guildner, C.     \$2,000.00     \$850.00     \$200.00     \$2,200       3     Meagher, R.     \$2,000.00     \$975.00     \$200.00     \$2,200       4     Boersma, M.     \$2,000.00     \$1,250     \$350.00     \$2,350       5     Linn, C.     \$2,000.00     \$1,125.00     \$350.00     \$2,350       6     McIntyre, W.     \$2,000.00     \$1,525.00     \$500.00     \$2,500	-	\$2,350.0				McCarthy, K.	1
3       Meagher, R.       \$2,000.00       \$975.00       \$200.00       \$2,200         4       Boersma, M.       \$2,000.00       \$1,200.00       \$350.00       \$2,350         5       Linn, C.       \$2,000.00       \$1,125.00       \$350.00       \$2,350         6       McIntyre, W.       \$2,000.00       \$1,525.00       \$500.00       \$2,500		\$2,200.0		\$850.00	\$2,000.00		2
4       Boersma, M.       \$2,000.00       \$1,200.00       \$350.00       \$2,350         5       Linn, C.       \$2,000.00       \$1,125.00       \$350.00       \$2,350         6       McIntyre, W.       \$2,000.00       \$1,525.00       \$500.00       \$2,500		\$2,200.0	\$200.00	\$975.00	\$2,000.00	Meagher, R.	3
6 McIntyre, W. \$2,000.00 \$1,525.00 \$500.00 \$2,500		\$2,350.0	\$350.00	\$1,200.00	\$2,000.00	Boersma, M.	4
	0.00	\$2,350.0	\$350.00	\$1,125.00	\$2,000.00	Linn, C.	5
	0.00	\$2,500.0	\$500.00	\$1,525.00	\$2,000.00	McIntyre, W.	6
New							New

Check the Commission field. Notice that the BASIC program has correctly assigned commissions based on the range you specified.

That's all there is to using File with BASIC. To customize this program for your needs, just delete the IF-THEN statements starting on line 23, add the code for the calculations you need to do, and change the variable names and types so they match the names in your datafile. Then the program will read the file, do the calculations, and write it back out just as it did with this commission example.

You can use File with BASIC to do any kind of computation File alone cannot do. Checking a range of values as we did in this commission example is one valuable use. Another is if you need conditional statements. For example, if you have a payroll file that keeps a running total of FICA contributions paid by employees, each month you could run the payroll file through a BASIC program to check to see whether or not any employees had paid the maximum FICA. If they had, you could have the BASIC program change the amount in the FICA column to 0 and, in this way, keep your payroll datafile accurate.



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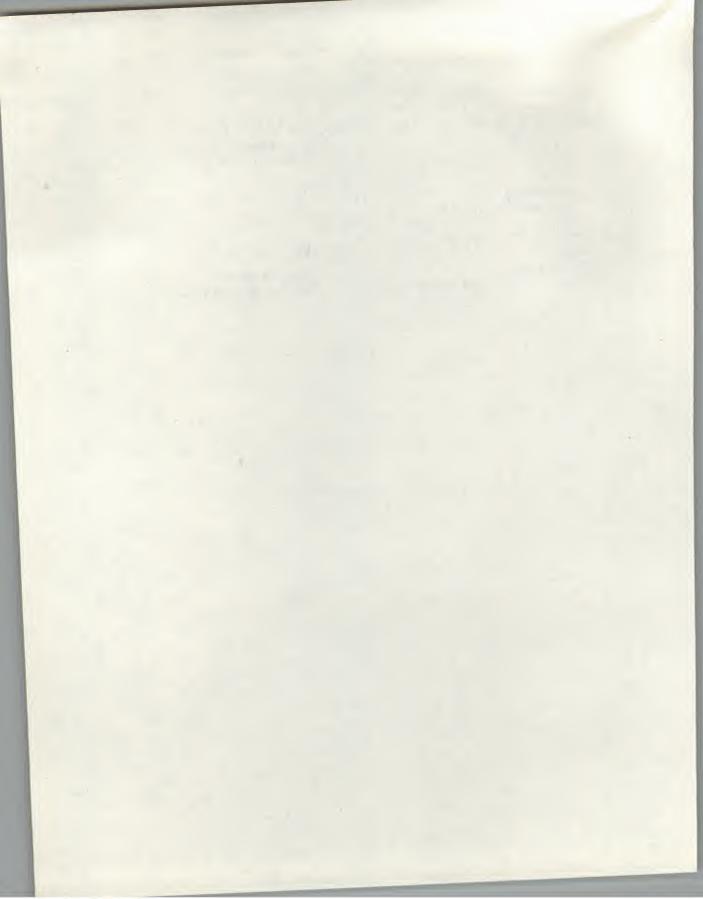
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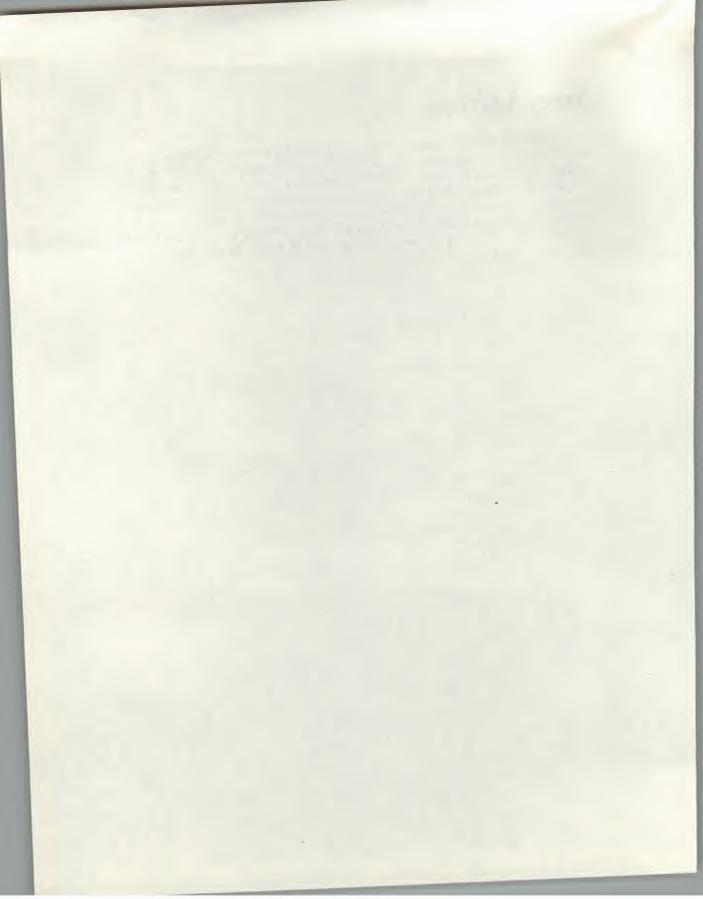
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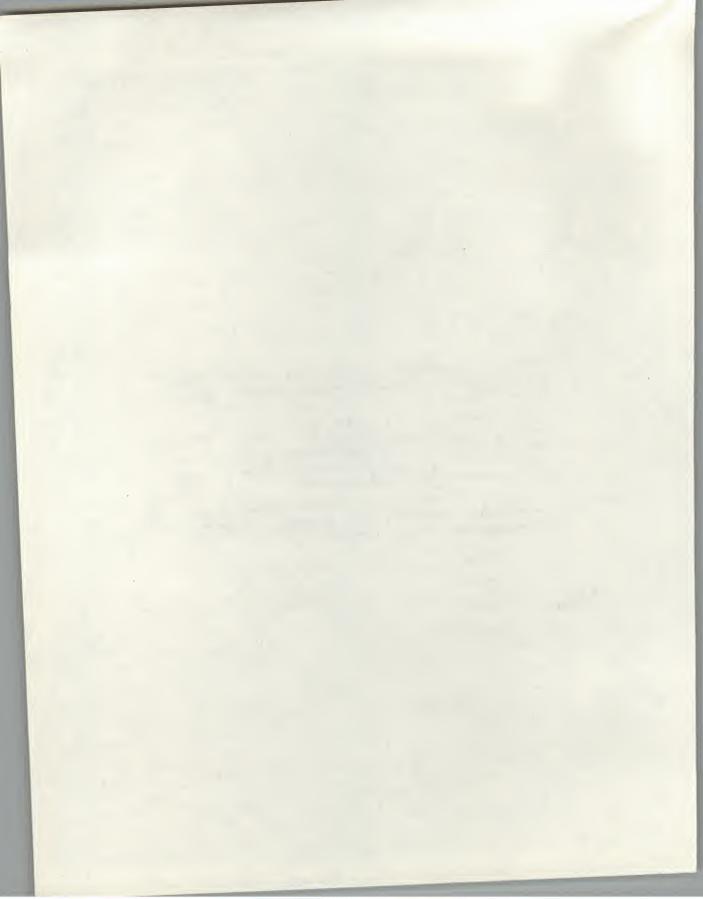
Nancy Andrews brings her writing and teaching talents together in MICROSOFT FILE. She earned Bachelor of Arts and Master of Arts degrees in English, and started her career as an English teacher. Nancy also worked in the field of training design, as a writer of training materials. In 1981, she discovered computers and has been hooked ever since. Nancy's company, Plain English, provides written documentation, as well as training and consulting services for small businesses. Her first book, *Property Management for Multiplan and the IBM PC*, was published in 1983.



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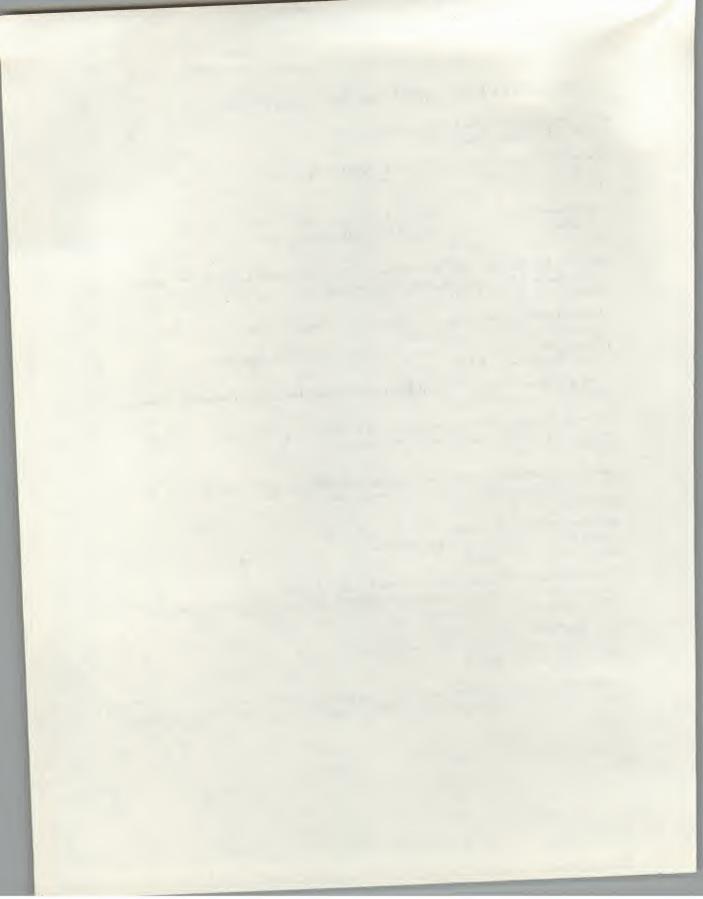
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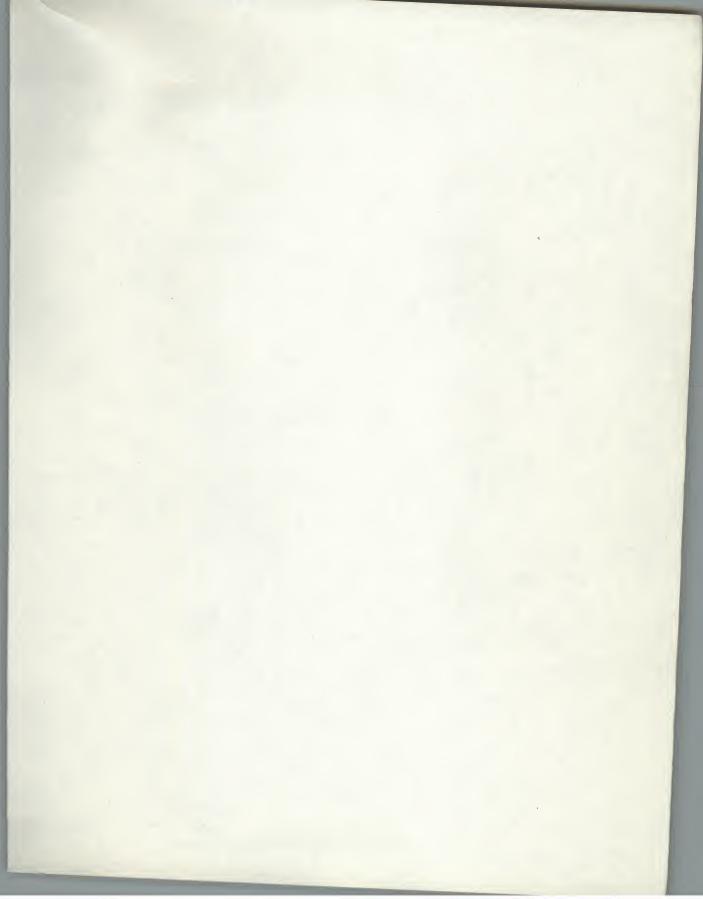
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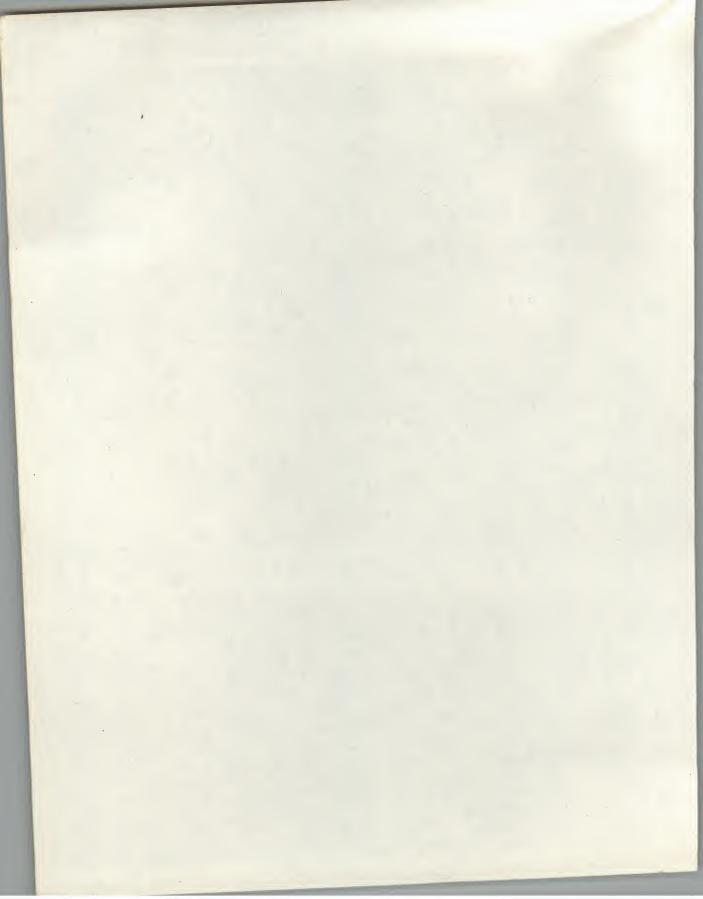
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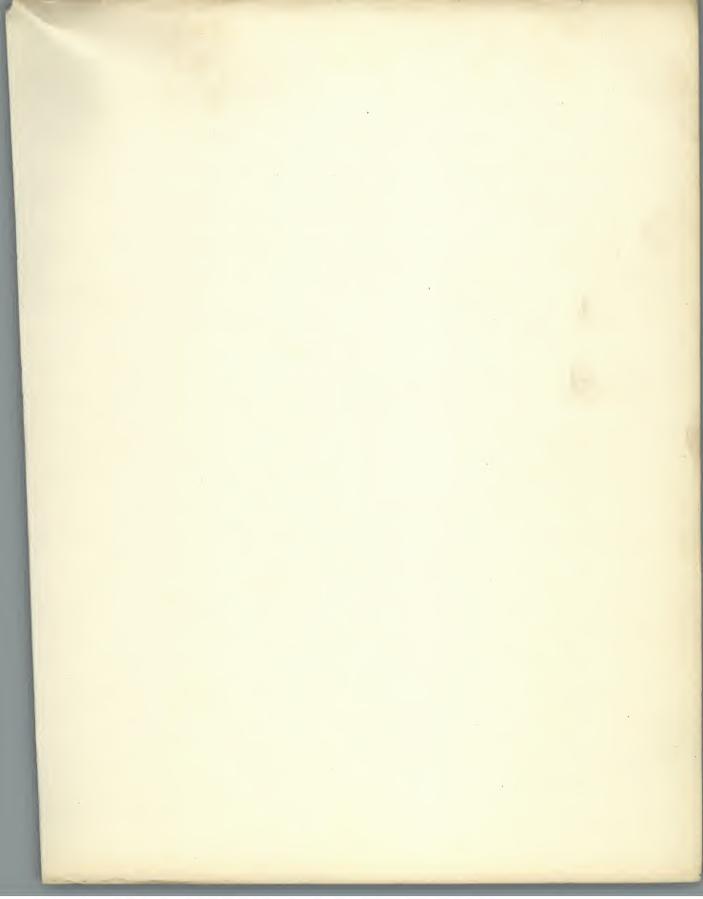
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